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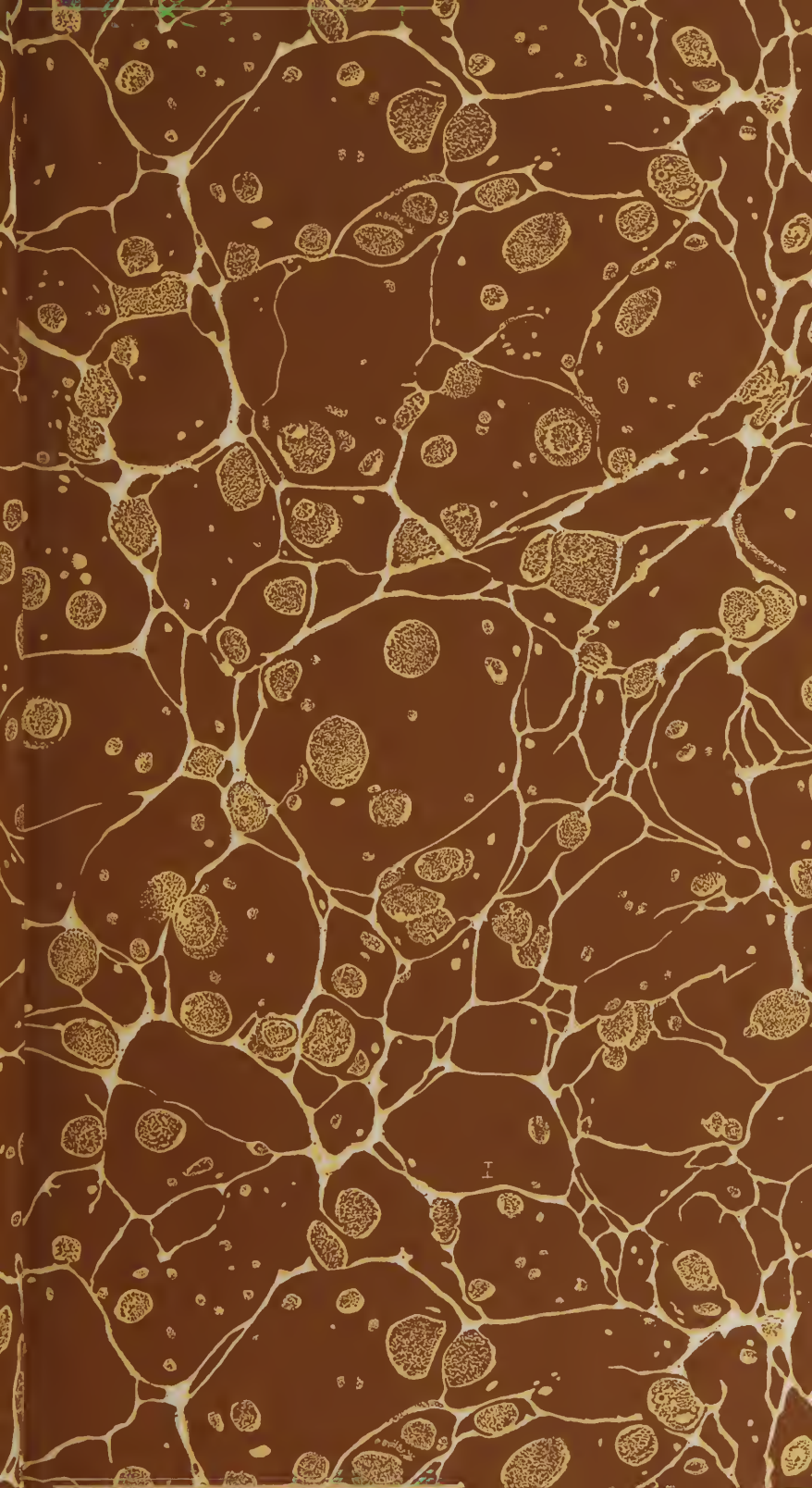
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PHYSICIAN'S ASSISTANT, J

CONSISTING OF

A SHORT AND COMPREHENSIVE

MATERIA MEDICA,

TOGETHER WITH A

SUMMARY VIEW OF THE WHOLE PRACTICE

OF

PHYSIC, SURGERY AND MIDWIFERY.

—  
BY THE CELEBRATED DR. BROOKS,  
*Late of Hebron, Me.*  
—



PUBLISHED BY BENJAMIN FRENCH.

1833.

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B873p  
1833

## PREFACE.

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In adding another volume to the large number of medical works that have already issued from the press, it may be necessary perhaps, to state a few of the reasons which induced the publisher to incur the expense of publishing this work.

It was generally known to a portion of the community who reside in the vicinity of the late Dr. Brooks, that at his decease, he left a manuscript copy, containing a particular account of his mode of practice in Physic and Midwifery ; consequently, a strong desire was expressed by them that it should be made more generally public. Arrangements were accordingly made (at a considerable expense) by the publisher to purchase the copy-right, in order to give it a more wide and extensive circulation.

There are, perhaps, few men who have acquired greater reputation as a Physician, than Dr. Brooks. The extensive practice which he had, not only in the place of his residence, but in many of the adjoining towns, abundantly show the high repute in which he was held. He was fully satisfied, by long practice, that the virtues contained in the herbs of our country, were far superior to the drugs of a foreign growth; for this reason he almost invariably used those of our own, in preference to those that were imported.

With these few remarks, we submit the work to the candor and inspection of an enlightened public. It is necessary to state, that as no one was procured to examine the proof sheets, a few minor errors may have occurred ; but we are confident that if any are detected, they are such as will not materially affect the value of the work. PUBLISHER.



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## THE PHYSICIAN'S ASSISTANT.

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*Sage.* This is well known in gardens, and is used for a sweat in almost all fevers ; it thins the juices and gives liberty to all the fluids ; is used in nervous complaints, in apoplexies, palsies, epilepsies, convulsions, vertigoes and lethergies, &c.

*Sasaparilla, male and female.* This is an American plant, the root only is used, and is here called Sarsaparilla.

The male sort and the female sort are called by divers names, petemorrell or life of man, the prince of piony, and is a wonderful sweetner of the blood. The male sort is the best, therefore, after the blood has been injured by the pox, or itch, or kingsevil, it helps greatly to correct the habit. This root should be used as a tea in diet-drinks ; it has likewise the same property as the female, which prevents faintness at the stomach, and a person may live a long time only by eating this root ; it is likewise good to prevent cholic and wind in the bowels occasioned by drinking cold water, &c.

*Mallows.* Of these there are divers sorts, as common and marshmallows, but all are of the same nature, and therefore good for all hot and sharp rheums, as dysenteries, that is purging and spitting blood ; from sharp rheum, mitigates pain, rheumatism, pleurisies, bilious cholics by relaxing and softening the fibres and causing a slimy mucous to envelop those sharp humours, that corrode the ligament.

*Fever-bush,* or as some call it ginger-bush, from the spicy taste. This grows in low moist land, and is generally known as warm or dryer and sweetner of the blood, and is good to be used with sassafras and sarsaparilla in all cases to cleanse the blood after surfeits, pimples, scabs, biles, sores, &c.

*Blue flower Deluce.* Of this there are two sorts, one grows in gardens, which comes from Europe ; the root of this is an

alternative and good for convulsions in children ; the other grows wild all over America, and is known by the name of blue flag ; the roots of this are in use, and are used by beating in a mortar and pressing out the juice—two spoonfuls of which, mixed with molasses, will work on any person. This is the best purge known in nature in all diseases whatever, and will frequently hinder fits, convulsions, cholics, epilepsies, and prevent old parts from lodging on the glands for many years, and is the very best thing that can be given in a cold, rheumatism or gout, for it heats the bowels and draws out of the limbs those cold rheums, and carries them off by stool ; it is nauseous to the stomach and apt to come up, and in children somewhat rough, but leaves them no harm. For weak people who cannot bear strong physic, take a quantity of the juice and put it in earthen platters and set it in the sun, and in a few days it will dry away and leave a gum, which will operate very gently, being mixed with molasses, two drams for a grown person and a less quantity for a child. NOTE. This root is entirely spoiled if heated or boiled, and will not operate.

*Sweet Flag*, called *Calamus Arromatic*. This grows in meadows, and is well known, is a hot root and is good in almost all cold diseases from flatulencies and wind-vapors in the bowels and stomach, and is a laxative given powder, mixed with honey, but is best used by distilling it in water ; then take a quantity of the new root, and put it into the pot ; then take one gallon of hot water so stilled from the root, and one gallon of rum, and draw off a gallon of spirit. This is a noble medicine in all complaints arising from colds and wind, and is good in all pale constitutions when the patient is dead and lifeless, and will often help him by taking it two or three times a day, and will heat and move all the circulations and cause a pale countenance to become fresh and ruddy, and is likewise good for children who have the rickets, mixed with horse-radish, &c.

*Irish Cabbage*. This is a morsy thing, growing in the sea, and is obtained of the fishermen, and is called dulce, and is a tolerable medicine for worms in children, first being boiled and sweetened, &c.



*Juniper Berries.* These are brought to us chiefly from the eastward, and are of the savin or red cedar, some grow very large and fair, but generally they are small and grow in dry land and ledges of rocks, but all are of the same nature and used in jaundice with bitters, as a warmer of the stomach ; they are likewise very forcing on the womb, and will promote the menstrual discharge, but should not be given to a woman with travel; the branches of the tree are more violent than the berries ; and if given to a woman with child, will cause abortion.

*Rue.* This grows in gardens and needs no description, is good in all hysteric affection, an excellent bitter for the stomach, and promote the menstrual discharge gently. It is a strengthener of the stomach, and good against poison, preserves the juices from putrefaction, and is therefore useful in all fevers and nervous complaints.

*Cancer Root.* This grows under beach trees and never lives over winter, neither does it bear any leaf, is very drying and astringent, is excellent for old foul ulcers, and taken inwardly by such as have cancers or ulcers and breaking out in the skin, it will cleanse and heal them.

*Crain's-bill Root.* This grows in English mowing fields, and is likewise drying and astringent, will dry away old ulcers, waste cancers by the decoction, &c.

*Succory.* This grows in clayey land in pastures, bears a blue flower, is of a very bitter taste, used for cold grumes in the stomach occasioned by frequent cold and indigestions which corrupts and putrefies the juice, also prevents the phlegm gathering on the lungs by strengthening the blood to digest the chyle which prevents asthmas and a foulness of the lungs, &c.

*English Rhubarb.* This is a round leaved dock growing in gardens, brought from England at first, is of the same nature of the Turkish Rhubarb, but only a quarter as strong, is an excellent purge, especially for children ; it should be taken in a powder with molasses ; a large spoonful will operate on an adult and for children in proportion. It should be kept a year dry and then grows better, is the only purge in the dysentery

or diarrhœa where working physic is necessary or is used.

*Mustard Seed.* Of this are two sorts, white and black, the black is the best and grows about houses, is well known, is a hot seed, stimulates and shakes the nervous system, and is excellent in all nervous disorders, as palsies, epilepsies and apoplexies, is a diaphoretick, causeth sweat, is used in fevers when the nerves are apt to be affected, will draw blisters by being joined with rye-paste or white pine turpentine.

*Flax-seed* is of a soft slimy balsamic nature, and therefore used in coughs and tickling rheums, is given in pleurisies, consumptions, asthmas and other disorders of the lungs.

*Blood-Root* grows chiefly on intervals, and is a powerful attenuant ; is very nauseous, cannot be kept in the stomach if taken in water, but given in spirit is immediately infused all over the body ; if we give it for vomit to children, give it in molasses ; it is the best emetic that can be given to them, and you cannot give too much, for it will all come up at two or three times ; but its most wonderful use is in the jaundice, scurvy and dropsy, but above all things it excels in the fevers we have had here of late, which come on slowly, occasioned by a tendor or thickness of the blood, which are the chief fevers we have had here of late years, and from the appearance of it, the physicians call it the putred fever, or the blood becomes so thin and oozy that it inflames the nervous juices and causes them to become convulsive, then they call it the nervous fever or the patient is affected with a purging of bloody stools, with griping caused by the blood being pent up in the vessels, and by a tendor that it cannot pass ; this the physicians call the bloody flux. But their putred and nervous fevers and bloody flux were all but one and the same cause, a thick bile and tendor of the blood, and to remedy it, they gave sour drops as elix. vit. and spts. sulf. and the like, which increased the oil to a great degree, until death often ensues, and instead of attenuating the blood, gave powerful cathartics, which served only to wear out the patients ; but blood root taken as much as would lie on a pint of a pen-knife, mixed with as much again of white

snake-root, which is used as a corrector, this taken six or seven times in a day never failed of a perfect and complete cure, and I never lost a patient in all my life, to whom I administered the above medicine before the juices began to putrefy, yet I have seen sad work by the doctors, who thought that they knew enough concerning the affair, yet in fact they knew nothing as they ought.

*Hemp Seed.* This is good to open obstructions in the liver and spleen, is used in the jaundice and in hypochondriac and hysteric affections, given in brandy or infused in cider.

*Burdock Root* is used in jaundice to correct the bile and flatulencies of the bowels ; the seeds are steeped with water for infants in flatulent cases, in the same manner that annis-seeds are given them.

*Annis Seeds, Caraway Seeds and Fennel Seeds* are all warm and used in flatulent cases and infused with Sena for physic to correct and prevent griping and sharp purges, &c.

*Turpentine* of all sorts, and *Balsam of Fir* ; these are detergent, and scour the glands and correct and heal by their warm nature, and are used in all inward bruises—diuretic—are used in the jaundice and gravel and stone, and all cold sandy ails ; but are not to be given in a strangury by reason of their heat. The balsam of fir is the best inward, but the others are the best in salves, ointments and strengthening plasters where they are commonly used.

*Sweet Balm Flowers* are of the cordial kind, but more cordial than any other flowers—are excellent for faintness or any decay at the stomach infused in wine or brandy, &c.

*Gilly Flowers* are of the same kind and used only for a cordial.

*Red Roses.* These are astringent and cordial, but used mostly in conserves or distilled waters, &c.

*Saffron* is a flower which loses its strength in drying, is aperient and sodorific, has a great effect on the nerves ; is used in hysteric and hypochondriac affections, as also all nervous affections. Five grains the dose.

*Tansey* is good only in infusion, for the oil has so great a

force that it will cause convulsion fits ; the seeds are however good for worms.

*Broom* or *Indigo Weed* is a bushy shrub, grows plenty in pastures near the salt water ; the root only is used, and that as a cathartic, generally with other medicines—is given to purge the glands in the scrofula or king's-evil, and is of great use, though not very pleasant, is used also in emplasters for old ulcers.

*Black Cherry-tree Bark* is given in the jaundice, all hysteric affections, in intermittents for worms ; powders given to children in molasses.

*Elder* is a bush bearing berries ; that which bears black berries is not so strong as that which bears red berries, but they are both cooling and purging, both the root, bark and berry. All elders are good in the dropsy and strangury and other hot rheums, and other watery flatulent disorders.

*Yarrow* is commonly known in the mowing lands—is used to stop blood and women's menses ; is used in emplasters to heal green wounds, is very powerful to stop a hemorrhage both from the mouth and nose, &c.

*Nettles*—two sorts, the great and small stinging nettles—these are used for all inward bruises, for spitting blood and likewise in the bloody flux.

*Johnswort* grows in old fields, in corn-fields, and is confounded with *Peterswort*, yet both are used in spitting and vomiting blood, or passing blood by urine and all inward bruises.

*Henbane* is a stupifying poison, and not used inwardly but outwardly in all plasters to ease pain. The seeds are used inwardly sometimes in cholics and sharp rheums, &c.

*Poppy Flowers* are anodyne—are used in syrups to ease pain. The Turkish opium is made of the juice of wild poppies boiled to a hard consistence ; the juice of our own poppies will make opium. These medicines, though good to ease pain, are very bad in some cases, as in pleurisies, and when expectoration is wanting it will prevent a cough and stop raising phlegm, and you must be very cautious in using it in all ca-



ses, for no person can bear more than a grain or two at a dose; one tea spoonful in syrup is a dose.

*Lavender* grows in gardens, and is a very grateful cordial plant, of a sweet smell, and used as a cordial, stilled in spirits of wine or brandy.

*Marigolds.* Of these are divers sorts, as French marigolds and our common marigolds, are apparently of the nature of saffron, but in a much less degree. The French are much the strongest; our common marigolds are a gently aperient and a good hot herb.

*Golden Rod* grows wild and is a pleasant warm herb, good in cold ails and promotes urine if obstructed by a cold and the gravel.

*Archangel*, or *Dead Nettles* look some like the other nettles, but will not sting, are used for spitting of blood and the bloody flux, and they are accounted the best sort in most cases.

*Wild Majoram* is a warm plant, and grows wild among bushes or rocky places in old fields; it is also cultivated in gardens, is used in all cold distempers, as the palsy, gout, rheumatism, stone gravel and the like, is as good a pot herb as sage or summer savory.

*Horse Mint* is of the mint kind, but very rank sented; there is also calamint and mountamint, which are warmer and pleasanter than horse mint, however all warm the stomach and take off nauseousness occasioned by a cold viscid mucus gathering in the stomach which causes a spitting of clear water, &c.

*Spear Mint* is used for such sickness as causes vomiting of watery rheums—it warms the stomach but is best in distillation. The oil of mint is very useful to stop vomiting, two or three drops taken on loaf sugar inwardly, or sometimes on a little flax or cotton and applied to the sternon just below the clevicula, will actually prevent vomiting, &c.

*Mother Wort* is generally known especially by elderly ladies, who use it in bags on the umbilical region for titilation and other affections of the womb, in hysteric disorders it is also given inwardly in a tea, but is not so pleasant as many others.



*Mother Thym* is a warm garden herb similar to summer savory, is used in all cold disorders where mint is used.

*Water Agrimony*, or *Cackle Weed*, of this kind are several sorts, but differ not essentially in virtue ; all are extremely diuretic, used for the stone gravel, dropsy, scurvy, jaundice and all diseases of the kidneys and bladder.

*Pumpkin and Mellon Seeds* are diuretic and promote the evacuation by urine greatly.

*Pennyroyal* is a wild warm herb, but may be cultivated in gardens, is used in hysteric affections and helps to promote menstrual discharges by thinning and warming the blood ; is also used in the hypochondria and slow fever, and intermitting fever. It affords a hot oil by distillation, which is good with camphor to anoint the limbs affected with the Chorea Sancti Vili or St. Vetus dance.

*Spotted Arsmart* or *Cloud Wort* is used in strangury, an intermittent fever and the bloody flux, is cooling and diuretic.

*Biting Arsmart* is in opposition to the above mentioned, and as that is diuretic when the cause is occasioned by heat, so this on the contrary will purge the passages of cold rheum which often happens after rheumatism, sweating and taking colds, which will often occasion the genitals to swell.

*Mullen* is cooling and diuretic, and used for strangury as the foregoing.

*Docks* grow in wet moist land, and are the rhubarb nature, used as a gentle cathartic, will leave the body somewhat costive ; the less dock is extremely astringent, the low and large dock operate gently, and are not astringent. The burdock is very bitter, is good for worms in children, is best of dock kind ; the root steeped in cider or taken in molasses is a superior medicine in the jaundice, and better for flatulent infants than annis seed ; these docks are good in all fluxes, &c.

*Hemlock herb and root*, imitating parsley, grows near the salt water, is a narcotic poison, and stronger than poppies ; not safe to give inwardly but outwardly, is used in palsies and old sores, as ulcers which are hot and parched. This herb will

keep back cancers a long time, and hot diseases may be thus treated with it, there being no danger of scattering them into the blood.

*Cocoa Flowers* and root, called also ladies' slipper ; this grows wild, and has a leaf like meadow plantain, and resembles white hellebore or little poke; but has a flesh coloured flower, and only one or a stock ; this is of so much power that if given internally will stop the operation of an emetic, in hysteric and hypochondriacal affections, on a woman taken with vomiting while in travail, will stop immediately—is used in scurvy and jaundice with great success, half a tea spoonful the dose.

*Garlic and Onion* are well known, are a diuretic, thicken the juices and draw disorders to the places where they are applied as a load-stone does iron ; therefore are good to be applied to the feet or sometimes under the arms in disorders of the lungs.

*Meadow Sweet* grows wild near Merrimack river and Brookfield ; looks like burnet root, though much larger, used in consumptions and all decays of the lungs, is a great healer of fresh wounds; only steeped and applied, it will heal a wound without salve or ointment.

*Bitter Sweet* is a vine and bears red berries, runs up high trees ; the berries are sweet at first chewing, but afterwards turn bitter. It grows in divers places in the woods in Woburn, is in great esteem for diet drinks to cleanse the blood, and the berries in syrups ; but I think the berries ought to be steeped in spirits, for they are good for the stomach, but sugar spoils it.

*Liquorice* is aperient and detergent, helps expectoration from the lungs, used in coughs.

*Rattle Snake's flesh, gall and grease* are a great restorative. The flesh should be powdered and mixed with wine ; this is useful in all decays of the constitution from whatever cause—one tea spoonful the dose. The gall must be preserved in chalk, given in fevers in powders, it causes sweat, is mostly used in slow fevers, for it heats and quickens the blood. The grease is subtile and will penetrate the flesh, and is the best remedy in nature to prevent the canker from corroding the teguments,

either internally or externally ; if internally, take five drops at a dose.

*Milipedes* or *Sow Bugs* are a long black bug, with many legs, found in old towns among rich land under flat stones—are a noble restorative, used in scurvy and jaundice, king's evil and all disorders, when purging the juices and restoring the solids is necessary—all which they will perform.

*Earth Worms* or *Angle Worms* are used chiefly in syrups in all tumors, king's evil ; they purge the glands, restore the juices as do the milipedes.

*Snails* are obtained mostly in marshy land, and are used in syrups as a restorative, are good in rickets and king's evil.

*Jay Birds* rob the corn-fields and are well known, are used in epilepsies ; they should be dried, powdered and taken in wine.

*Steel* melted with sulphur is the safest method for this medicine ; it will promote the menses without danger, other chalybeates will occasion convulsions in some persons.

*Lead burnt with sulphur.* This and all other preparation of lead, such as white, blue and red, are not fit for internal uses, but are good in salves and ointments to dry up and scatter the superfluity of humors.

*Burs of horses legs* are strong foeted things and therefore good in hysterics and divers other disorders where foeted medicines are needed to quench the juices.

*Rust of Iron* is astringent, and is used to dry up and prevent all fluxes of the belly, will prevent the flow of women's courses and is good for the jaundice.

*Hartshorn* or *Deershorn* is used two ways by shaving and boiling in barley, to be drank in fevers, or by being burnt and powdered and given to stop the evacuation of the menses.

*Castor of the Beaver* is used in fevers to prevent nervous disorders, is used also in all nervous complaints and is attenuating.

*Musk* are of two sorts, one comes from Muscovy, and is the musk of the civet cat ; the other is musk of our common musk-squash, but that from Muscovy is esteemed the best, yet both

are good in the disorders of the nerves and most spasms, and convulsion will give way to the musk and amber grease.

*Mouse Flesh and facus or dung* is well known; the flesh of mice dried and pulverized will prevent an involuntary flow of urine, which to some children is very natural. Take five or six of the faces and bruise and mix with honey, given to an infant will purge as well as manna.

*Filings of Iron or Steele* are used to quicken the blood, and will greatly promote the flow of the menses which they perform by their violent motion, but should be given in cold, pale constitutions lest it raise convulsions and uterine furor, &c.

*Boar's Stones* are used chiefly in the nervous cholic by being dried and reduced to a fine powder and given in molasses.

*Stalion's Stones* dried, powdered and mixed with asafœtida, and aloes are a supreme remedy in hysteric fits, &c.

*Red Earth* or the *Mother of Iron* is found near iron mines, and looks like Spanish Brown. Put it in water and dissolve it, then strain the water, settle and pour it off, then will be left a fine clay like bole armoniac which is good to stop spitting of blood and stay women's menses, and will hinder the causer from corroding the ligaments, and will entirely stop the course of it; one penknife point full the dose.

*Antimony* is a leaden mine, brought over here from other countries, yet some is found here, is used in powder with one half brimstone. Take as much as will lie on the point of a penknife in half a spoonful of molasses; it will operate on an adult and scour off the slimy foulness of the intestines, and are used when other purges will not answer, and the dose is four grains of antimony beside the brimstone.

*Potash*, fixed salts or *Sal Absinthe*, are given internally, are diarrhœtic and stop vomiting, also used in the jaundice, but must be given in small quantities, and in teas made of mallows or some softening plant, used externally; it is a caustic, like quick lime.

*Slacked Lime* is a caustic, but the water in which it is slackened is used internally for ulcers and other inward infirmities oc-



casioned by the lues venery, itch, scab or the kingsevil, &c.

*Oyster-shells* when burned are quick lime, and of the same nature of the stone lime, but is best to powder without being burned ; it heals and cleanses the prima via or first passages of the whole internal surface of the viscana.

*Honey Bees* are diarrhœtick, and are good where other diarrhœticks are used, &c.

*Bark of Basswood* is safe in all disorders of the kidneys and bladder, and in the gravel, and also for the eyes. The bark of the root steeped in water will turn it to a slime ; the eyes being washed with it will be healed. It is very cooling and agreeable.

*Skunk's Foetid Urin* is used in an epilepsy and some hysteric affections, and it will sink and damp the spirits beyond all foetid medicines now known, and it is affirmed that a small quantity put into the eyes of an old person, will draw out the ball and give him his full sight as when young, and be a great impediment to those who sell spectacles, and I think it is worth putting in practice by those who have an opportunity.

*Sloe Root Bark* is astringent ; will stop intermittent fevers as well as jesuit's bark, if given in double quantity. It grows in hedges between Cambridge and Charlestown, and bears a little black plum.

*Oil-nut Tree Bark* is a rough cathartic, but is much better than many of the shop medicines for the purpose.

*Nerve or Neats Foot Oil* is as good as olive oil for all internal uses or in emplasters or ointments.

*Bears' Grease* is used to prevent fleas and other vermin in campus martis or the camp of soldiers, and is better for women after delivery than spermaciti.

*Tortoise Grease* is healing and used in ointment for cuts and green wounds.

*Devil's Bit* is astringent, is used for canker and all foulness of the blood, for breaking out on the skin, it should be taken in tea without sweetening, is good for emplasters and ointments.

A wash of it is used for old ulcers, and thereby they will be cleansed and healed ; experience teaches it.

*Horehound* is a bitter herb, it grows in gardens, has a very woolly leaf, prevents tickling coughs, and is used in syrups and diet drinks for consumption.

*Whortle-berries* are cooling and astringent, used in diarrhœtick dysenteries and sharp rheums, and ought to be given in conserves mixed with warm diaphoreticks.

*Wild Pink* grows in swamps on bushes like blueberry bushes, are glutinous and of a sweet taste, make a beautiful conserve, very cordial, used in consumptions and all decays of the lungs, and in faintness of the stomach, &c.

*Pepper Pods and Seeds.* The pods are red and grow in gardens, are extremely hot, used in palsies and all lethargies, is attenuating and is good in divers medicines for cold constitutions, is a diuretic and heats the whole body.

*Lung Wort* grows on various trees like moss ; that which grows on white oak is best, is used in infusion for the jaundice and in syrups for consumption, is an excellent bitter and strengthener of the stomach and ought to be used in syrups plentifully.

*Tungus* or *Bears Bate* is a root growing in red oak land on the hill in Wilton and New Ipswich and other mountainous places ; it has a bulby root, and grows in bunches with heads full of seeds, is about four inches high, has no leaves, the part under ground looks like the knot of a tree, is soft when green, but extremely hard when dry ; reduced to a powder and given in wine will stop the menses and brace more than peruvian bark, is used intermittents of all sorts. This medicine ought never to be forgotten, for it will stop women from flooding after delivery to a wonderful degree, above all others known or understood by practitioners in general.

*Canker Herb* grows in plenty in new townships in shady moist land, and is about a foot high with one stalk and three broad leaves like dragon ; between the leaves comes out a blossom, either white or inclining to red, and blossoms in June; the flower either stands upright above the leaves or turns down

and blooms below. The root which is the best part of the plant is a little like devil's bit root, sometimes cracked is good for the canker in the bowels and scurvy, used for the jaundice, and has performed wonders among our soldiers in the late war in the camp disorder and bloody flux. One tea spoonful the dose.

*Sun-dew* grows in moist meadows, is a hot herb, used to steep in spirits to dissolve the blood gathering about the spleen, and in cold disorders, and is the best medicine for the vapors ever known.

*Sweet Rush*, or *Ganbright* is a rush so rough as to scratch iron or pewter bright, and grows plenty in intervals and other moist lands, tastes sweet, is used as a tea to purify the blood and render it fluid. It suits diet drinks best with malt.

*Wild Mandrakes* or *Meadow Cups* are cooling and of a narcotic nature, used in fluxes, &c.

*Trumpet Weed.* The root of this only is used ; it grows six feet high or more with a hollow stalk, is diuretic and will prevent the common breaking out and itching of the private parts of both man and woman, and in all diseases of the kidneys and bladder; is used to forward delivery by relaxing and preventing sharp cramps in time of delivery.

*Genseng Root and branch.* This grows in hemlock land, and has been in such esteem in China as to be prohibited by government from being exported. It has been supposed to contain the virtue of all other plants ; but however the root is detergent and of the nature of liquorice, and therefore used in asthmas, pleurisies, coughs and all foulness of the lungs. The branch is not so detergent, but makes a tea much preferable to any bohea or green ; grows plenty in our country on hemlock land.

*Yellow, white and black Snake Root.* These grow all over America, and is considerably plenty. The yellow is bought in the shops, and brought from Virginia ; the white grows here in meadows, and the black grows on intervals—all have a leaf alike, only larger one from the other. The Virginia is smallest and given in fevers to obtain a sweat, and is good against poison.



Of all sorts the white is the best, that which grows among us, is attenuant and sodorific more than the Virginia root. The black is the rankest and has the most spicy taste, but not so saccharine ; all are antidotes against putrefaction of the blood, therefore good in all fevers.

*Elecampane* is usually known, the root only is used, is good in coughs and consumptions of the lungs, for asthmas and other disorders of the lungs, is used chiefly in syrups, is also lithotropic ; half a tea spoonful the dose.

*Ground Ivy*, called by some *Gill go by the ground*, is a restorative in syrups, but the distilled water is of no use, for the virtue of the plant will not rise in distillation, is useful in consumptions and therefore should not be omitted.

*Cohosh* is used by the Indians to prevent what we call catching cold, and the squaws or Indian women take it at the time of delivery, and are preserved from those dangers which our common women are always subject to ; therefore I think that we may obtain something valuable from this hint—is used also to prevent fevers, taken every morning and chewed in the mouth, and especially when we visit sick people, is likewise good for faintness taken in wine or brandy. Of this plant there are three sorts, the red white, blue and black ; the white and red differ but little, but the red is accounted the best and most strengthening, but the blue is a detergent, even more so than liquorice, it should not be given to women in travel or at the time of delivery if there are any signs of flooding, but may be given in the contrary extreme.

*Hacmatack Balsam and bark.* This is of the spruce kind. The balsam is like rosin, and issues out of the tree where it is bruised or wounded ; is used in all internal bruises where the turpentine are used ; but this balsam is of singular service in fluor albus or whites. Half a tea spoonful a dose.

*Chokeberry Bark and root.* The berry, bark and root are all bracing and of the nature of cortex peruvianus or jesuits bark, and therefore used in intermittents of all kinds, also in fluxes, but must be used with caution.

*White Ash Bark.* The root is a gentle cathartic for children, it leaves them costive as rhubarb, &c.

*Dragon Root* is a very hot root, must be dried and powdered, then given in cholics with molasses, especially such as come by drinking cold water. Half a large spoonful the dose.

*Wild Cucumber* or *White Root*—it takes its name from its taste, and is good for pains at stomach and faintness and consumption.

*Comfrey Root* is a glutinant strengthener and heals greatly both internally and externally. The powder is used dry to incarnate any place where the sharp humors prevent ; it will destroy fungus or proud flesh, is excellent in women's weakness, and is used in strengthening plasters either alone or in composition.

*Solomon Seal Root.* Of this there are two sorts, white and yellow ; the white is most esteemed, both are of a glutinous nature and used in strengthening plasters and salves, is generally used wherever cumfrey is, &c.

*Cure-all* is of the rhubarb kind, grows in meadows, has a leaf like a turnip, is good for fluxes, it will operate on a child to leave it costive, is used to brace and prevent sharp rheums, which cause continual coughs, is good for sore mouths, and must be either chewed and swallowed or simmered in water, but not sweetened ; the root only is used.

*Prickley Ash, cloves and bark.* This grows in Groton, Dunstable and Hollis, and has a leaf like an ash, but the tree is full of pricklers like a briar ; the cloves are ripe in September, and almost as hot as pod pepper, and of scent like a lemon peal ; the bark is of the same nature but not so hot. This taken in brandy or any spirits is a supreme remedy in the cold rheumatism and in all diseases where heat is wanting, is used in fevers where sweating medicines are needed, and in the gout and fluxes of the belly occasioned by cold. If it be too hot in fevers levigate it to a powder and mix it with whortleberries in conserve and in powder alone. Take one pen knife full at a dose.

*New-England Gentian* grows in old fields and bears a yellow blossom, and is called cholic root, is very bitter and good in the wind cholic and quickly eases pain.

*Dog Grass*, so called, because the dogs eat it when sick at the stomach, is a noble thing to give ease in the wind cholic and prevents vomiting bile which sometimes continues so as to kill the patient.

*Seneca* or *Rattle Snake Weed* grows in runs and brooks like spearmint, is very bitter in taste, is attenuating and useful in a pleurisy, &c.

*Camomile* is a sodorific and good bitter, used in fevers, and the blossom in bitters is often prescribed in fevers of all kinds.

*Wormwood* is hot and dry and a bitter, but if used too long will weaken the nerves by its drying property, is lithorteric, heats the stomach and prevents vomiting.

*Sensual* is sodorific like snake root.

*Carduss Benedictus* or *Blessed Thistle*, is of the thistle kind, is attenuating and healing, likewise a good sodorific in all fevers.

*Sarison's Wound Wort* or *Mouse Tongue*, is a mucilaginous plant; the root is used by being bruised and steeped in water, which turns it to jelly, and this applied to burns will completely take out the fire and heal it, if kept from the air, without salve or ointment. *Note.* It should be applied warm, for no cold thing should ever be put upon an inflammation. The leaves of this are dried and drank for tea, but bohea is much better, it softens the bowels and balsams them over and renders them slimy; it is good therefore in hot bilious cholics drank plentifully, and for all cankers and sharp rheums either root or branch; the branches however do not discover their slimy nature in the mouth as does the root.

#### SHOP MEDICINES, COMMONLY USED AND KEPT.

*Opium* is the juice of the Turkey poppies, and is anodyne, used to ease pain. *Laudanum* is a good servant but a hard master and should be used with care and skill, and in whatever form it is used there ought not to be more than a grain and a half

given in four hours and seldom so often, used in the rheumatism and cholic, but often will draw the pain or disorder into the limbs where it will remain.

*Gum Gulbanum* is the gum of a tree in the East Indies, is used in hysteric fits and applied as a plaster to the navel for disorders of the womb and weakness of its parts.

*Alloes.* Of these there are two sorts, socotrine and hepatic. They are made of the juice of an herb in Barbadoes, boiled to a consistence, the hepatic is so bitter that it is given chiefly to horses, but the socotorine is a good cathartic either alone or in pills, or mixed with other gums and powders, is likewise powdered and mixed with spices and called hierapica, taken in spirits as a warm physic, and good in cold flatulencies, but very injurious in hemorrhoids or piles, &c.

*Asafoetida* is a bad smelling gum from the East Indies, and used in divers forms to damp the spirits or nervous juices, and is used in hysteric fits and uterine furor, &c.

*Myrrh* is a gum often mixed with pills ; is an alternative and is often made into linitures to prevent sores from gangrening ; it will cleanse and heal them, is used internally in all inward bruises.

*Cantharides* or *Spanish Flies* come from Spain—are used to draw blisters and cannot be given internally without causing a strangury, which they will do sometimes in a blister if they are laid on the thighs. Some have given wine wherein flies were infused for a stoppage of urine from a cold cause ; but even this is dangerous as it heats and is apt to excite a violent desire to venery, &c.

*Mercureus Dulcis* is a preparation of mercury, and is a noted medicine for worms in children. Three or four grains, mixt with flour of sulphur and given in molasses is not dangerous, for the sulphur will prevent the mercury from lying hold of the glands. Once or twice a day is often enough to give it.

*Calomel* is a strong preparation of mercury, and is used in salivations ; four or five grains in conserve of red roses will salivate, but in occlusion, six or seven grains are given, and as



much diaphoretic, antimony mixed with it every day will raise a spitting ; but these edge tools must be used with caution.

*Roman Vitriol* or *Blue Vitriol* is not used internally but externally to corrode proud flesh or fungus, and to wash foul ulcers, and dissolved in water is used to scatter the inflammation of sore eyes, &c.

*Red Precipitate* is a preparation of mercury and a corrosive.

*Basilicon* is a common salve. There are two kinds in the shops, black and yellow, the black is the best, but the yellow will heal after a while.

*Diacalon Simplex* is a white salve, and used to keep back tumors. There is another sort called *diaculon gum*, both are good when tumors are to be kept back from the parts and not brought to suppuration.

*Sal Volatilis Spiritus* is used to stimulate the olfactory nerves and prevent faintness, and are the best to be given internally to prevent syncope ; for those sold in shops by the name of hartshorn are made only of urine and lime, and is not the spirit of salammoniac. Volatile is as good as this, but it performs no cure.

*Sweet Spirit of Nitre* is used in divers ways, is diuretic and will help in a strangury and others occasioned by heat, St. Anthony's fire, both internally and externally.

*Brimstone* or Sulphur is given to stop a salivation, is used in oil of sulphur, is attenuant and exposes persons to take cold and of the like nature, it is also used in ointments to cure the itch by anointing the skin, &c.

*Casteel Soap* is made of turpentine and salt of ashes, opens the obstructions of the liver, and is good in the jaundice, is diuretic and useful to apply to a burn.

*Camphor* comes out of a wood in the East Indies, and is so penetrating that it is infused all over the body as soon as the warmth of the stomach sets it in motion ; it is therefore the best sweat known in medicine, used in hysteric affections and dissolved in spirits to wash swelled and bruised limbs, as well as sedimantious tumors.



*Oil of Anis* is of the same nature of the seed from which it is distilled ; it is chiefly given to flatulent infants. One or two drops in water at a time is sufficient for a dose.

*Turpith Mineral* is made at the furnace of mercury and is a vomit ; it is given to adults from two grains to six, it was formerly given to children two or three grains at a time, but at present is not much used, for in grown people it will sometimes carry them into a salivation against their will.

*Ethiops Mineral* is mercury and sulphur ground together, and will not salivate. It is a noble medicine for worms in children ; four or five grains at a time—it may be given in doses of six or eight grains to adults every day as a cathartic in old scrofula cases, and all disorders occasioned by a debauch, &c.

*Native Cinebar* is a mineral substance, and should be powdered very finely when given. It stops the smallest strumas, and is used in king's evil and all manner of obstructions of the glands.

*Ens. Veneris* is a mineral substance and prepared at the furnace, and chiefly used in obstructions of the menses, and it is better than any other preparation of iron or steel.

*Crude Antimony*, that is, lead mine, and is used chiefly after preparations.

*Vinegar of Squills* is given to persons to promote expectation, and is a gentle emetic for children which are troubled with asthma or quincy. One tea spoonful a dose.

*Spermaceti* is the oil of the whale's seed, and is given as a balsam for all internal bruises, and to women newly laid in, and is much used, but not better than anis seed oil, if so good.

*Elix. Proprietatus* is made of myrrh, aloes and saffron in spirit of wine, and the most common drops in shops ; is used for the jaundice and faintness at stomach. Twenty-five drops are a common dose.

*Verdegreae* is not used internally but externally, in ointments to cleanse old foul ulcers, in which it is a good ingredient.

*Flowers of Antimony* are a preparation of antimony, and a very smart emetic, is used in palsies, apoplexies and all violent

disorders of the nerves where strong vomits are required. The dose is from four grains to seven.

*Penice Antimony* is likewise both cathartic and emetic, and the best preparation of antimony ; it however operates mostly down, and is given from three to six grains in stubborn disorders and strong constitutions.

*Crocus Martilorum* or *Saffron of Metals* is seldom used at present ; it was formerly used by putting an ounce in a quart of wine, and let it stand some days, then pour off some of the clear liquor for use. The crocus is heavy and will keep at the bottom ; the wine will have little or no taste of the crocus, but a glass of it is a smart emetic, and when it is all spent, you may fill up the bottle again with wine. The crocus should never be taken in substance, for it will not dissolve.

*Sal Mirabile Glaubers* or *Glaubers Salts* are given for a purge and is better than epsom salts. An ounce is a dose for an adult and robust constitution, but generally about half an ounce at a time.

*Nitre Catharticum* or purging nitre is a cathartic and diuretic, and given from two scruples to four drachms.

*Allum* is not used in medicines, is only for sore mouths, and to moisten other medicines.

*Tertar Emetic* is the common cathartic of the shops, operates harshly, and is not to be given to children ; the dose for adults is from three to six grains.

*Salt of Vitriol* is to children a vomit, and will operate as soon as it is swallowed, like blood root, but is not so good. A dose is six or seven grains.

*Rhubarb*. The best comes from China, and the other from Turkey ; it is of the dock kind, purges and leaves the person costive, is used in fluxes and other relaxations. The dose for an adult is one drachm, for children in proportion.

*Ipecacuana* or *Brasilian Root* comes from Brazil, in South America, and is in great esteem as an emetic and cathartic ; it leaves an astringent, is ordered in diarrhœas and dysenteries ; its dose to adults is from ten grains to one scruple.

*Jalap* comes from new Spain, and operates by its resin, but the best way to use it is to give the root in powder, it operates well; the dose is from one dram to two for children; the rule is to give as many grains as the child is years old, but this is not sufficient if the child be seven or eight years old; but rhubarb is a better cathartic for young children than so rough a purge.

*Pill cocoa minoris* is commonly used for a purge, and will work smartly. Five common pills, as they are prepared in shops, are a common dose.

*Pill Fœtida* or *fœtid pills*. These are mixed as a fœtida, and given in hystericks and titulation fits, and all disorders of the womb and spleen, and for those raisings and chokings of which women so often complain. The dose is one or two of the pills, taken on going to bed.

*Spirit of Lavender* is only warm, and a cordial; the dose is twenty-five drops at a time.

*Oil of Linne* or *Lintseed*, is drawn cold, and is good in coughs, and all diseases where flax-seed is used.

*Amigdalina dulcis* is the oil of sweet almonds, and used in coughs and all disorders of the lungs, and in consumptions, ulcers, &c. of the lungs. Five or six drops the dose.

*Oil of Amber*, is an oil that carries with it a great fume, and damps the spirits; is given in hysterics and epilepsies, and is a good medicine in some cases before musk, and some people cannot bear perfumes, and this with musk makes them worse, and brings on fits, &c.

*Oil of Turpentine* is much used, and is very hot, detergent and diuretic—is good for the gravel, and strengthens the parts; eight or ten drops at a time is in general sufficient—giving too much at a time and too often, will rather weaken than strengthen; it is also good in ointments and plasters; also to anoint a limb which is broken or bruised.

*Cream of Tartar* is cooling and relaxing; it is given for costiveness to purge away the sharp rheums in the blood; its dose is from one scruple to two drachms.

*Saccharum Saturni* or *Sugar of Lead*, is much used of late by practitioners. From an inspection of some modern writers, it appears to be used in fevers of all kinds ; but it being a preparation of lead, I cannot see the use of it where the juices need attenuating, and therefore it is better to lower the inflammation of the blood in intermittent and burning fevers, rather than in slow fevers.

*Oil of Vitriol* is not good for inward use, but being dropped into water and used as strong as can be borne, is a good wash for a finger that has a felon or a whitlow, as soon as it begins to come, as it will entirely stop it and prevent its coming to a head. It is also useful to make a wash for an old foul ulcer, and will effectually cleanse it.

*Balsam of Peru* is of the turpentine kind, and comes from Peru, in New Spain, and is good in internal bruises and ulcers. The dose is from five to nine drops on sugar.

*Cortex Peruvianus* or *Jesuit Bark*, comes from Peru, in New Spain, and is a very good bracer of the solids. It will stop intermittents of all sorts, fluxes, &c. in the menses ; is a noble medicine in skilful hands, but a mischievous tool in the hands of the ignorant. This bark should be given with great caution, for after bracing, the body pens up the disease, and thus hinders nature from performing her customary evacuation and thus the patient is destroyed.

*Isinglass* is a production of the penis of the whale, and is boiled in milk to a jelly, and given to women in seminal weakness and the fluor albus.

*Pills Edabi* are rough pills, and work very harshly. They are given in chronic disorders, in the lues venera after a salivation ; the dose is from three to five.

*Pills Rhie*, are warm moderate pills, and an alternative, and help to promote menses ; the dose is two pills every night.

*Mililot Salve* is made of the juices of mililot gently drawn, and is used to spread on flies for an epispastic, and is of itself very healing, and used alone to promote superation.

*Black Helebre* comes from the East Indies ; it is a sharp



purge ; it looses its strength by drying ; is attenuant, and given as an attenuative, promotes menses ; works little by stool ; dose from fifteen grains to two drachms.

*Lapis Caliminaris* is a stone used for sores in conjunction with blue and white vitriol, dissolved in water.

*Putty* is used likewise for the eyes.

*Contrayerva Root* is used in fevers for a sweat, but is no better than many of our own medicines. The dose is five or six grains.

*Lapis Contrayerva* is used in fevers as a diaphoretic or sudorific ; dose about five or six grains once in four or five hours ; but a fever must be very mild to give way to these gentle sudorifics ; mark it well.

*Tartar* comes out of old wine casks, and is used with other medicines to dissolve them.

*Salt of Tartar* is much used in fevers. One or two grains is mixed with composition ; it is diuretic, and dissolves those tough viscid humors in the blood, and prevents the lentor of it.

*Hura Pura* is a warm cathartic, but should not be given in the piles ; it is dissolved in spirit, half an ounce for a pint, and two spoonfulls a dose.

*Manna* is a honey dew in Arabia, and given to costive infants, dissolved in a little breast milk or in water.

*Briony Root* is cathartic, but the distilled water is chiefly used in hysteric and hypochondriac disorders.

*Buckthorn berries* are used in syrups ; one spoonfull a dose. As an alternative, this syrup is used to mix powders and gum into pills.

There are multitudes more of our simples not mentioned, which the practitioner may improve upon ; but those mentioned are such as I have most commonly used, and can from experience recommend them to the public ; the shop medicines which I have generally used, I have here set down ; yet the practitioner may turn to Quincy's Lexicon and Dispensatory, where he will have the subject in toto.



I come now to the assemblage of diseases ; and first of Fevers in general.

*A Fever* is an inflammation of the blood, occasioned by some obstruction in the blood vessels generally, from a lentor or size which obstructs its circulation. To remedy which we must examine into the circumstances of the patient, whether he be plethoric, and his blood be very high and full ; whether he be corpulent or not, for if he is, blood must be let, whether it be a pleurisy or burning fever, the blood must be lowered ; and after that, if the sweat breaks out of itself, nature is at liberty to carry off that fever ; then to assist, give only cooling and softening medicine ; let his drink be mallows, mullen, spotted arsmart, and meadow plantain, then a gentle purge of rhubarb ; but if the patient be very much loaded at his stomach, give a vomit of tartar emetic in the beginning, immediately after bleeding ; and if there be a great obstruction in the bowels, give senna ; or if you prefer our own medicines, let it be jalap in fine powder—a tea spoonful will work up and down smartly, and relieve both the stomach and bowels ; or you may give two spoonfuls of the juice of blue fluor de luce, this will work chiefly down, it is taken in molasses, and is good as a purge for robust constitutions. But if the patient be plegmatic, omit bleeding, and give attenuating medicines, to divide the lentor of the blood, instead of a vomit at the beginning of the disorder, as a diaphoretic antimony and native cinnebar ; to six grains diaph. antimony put one grain of tartar emetic, which will give a sudden shake to the solids, and dissolves the lentor of the blood ; then sweetening medicines are good to open the pores and divide the juices ; last of all, give gentle purges. But if you would give our own medicine in these constitutions for attenuating, take a little blood-root in powder and mix it with white snake-root, give a dose twice a day ; it is superior to all shop medicines on earth, for it prevents the fever from bringing on a putrefaction or disordering the nerves ; for fever is not putred at first, but the fevers heat, and hot medicines causes putrefaction.

A secondary fever depends on some other cause, such as a sore, bruise, burn, or pain ; and to cure such fevers, the cause must be taken away, and then the fever will cease. Drawing blisters, though used, do little or no good in general.

*A diary Fever* is only a fever of one fit, which ends in one day or twenty-four hours, and requires nothing more than a little rest. This fever is often seen in children, who are taken violent and well next day.

The next are the tribe of intermittents, that is, what we call Fever, and vulgarly has these names, Quarters, Simple Quarters, Tertians, Simple Tertians and Double Tertians.

The next are *remitting Fevers*. The intermittents have a cold fit and then a hot fit, and sweat follows every third day ; but in the remitting fever the fit comes and goes quite as an intermitting fever, but without any symptoms of a cold fit, the cause is one and the same thing in both, and it proceeds from relaxation when the vessels are relaxed so as not to be tense enough to keep the pores open ; the perspiration may be free, then the juices stagnate at certain periods of every day or every other day, and sometimes not so often, and a violent heat is kindled in the blood. All medicines given in the time of intermittents is dangerous. The medicines should be given between the fits only. If an intermittent or a remittent fever, the fits come oftener than they did at the beginning ; they will at length become one fit, and one will overtake the other, and then nervous fever comes on immediately, then the blood putrefies and death soon makes its appearance ; this was the case in the district of Pepperill, where it swept off great numbers of the inhabitants ; therefore braces should be used in the beginning, between fits, of cortex peruvianus, sal absinthium ; after a vomit is given or diaphoretics, give antimony, or you may take our own medicines, such as blood-root, in fine powder once a day between fits, and make a tea of sloe tree bark or give prickly ash bark, or make a tea of sarsaparilla root, crain's bill, meadow plantain and cure-all, &c. Boil your tea with rusty iron in

a pot, and the intermittent is not apt to return, as they are often wont to do.

A spurious intermittent is of the same kind as a true one, but has sometimes violent symptoms with it, as vomiting or pain and griping with looseness, cholera morbus, cholic, pains in the side, spasms and cramps. But these symptoms return at their periods as intermittents do, and have the same medicines given between the fits or periodical return ; yet I usually give medicine which are good in nervous disorders, as mustard seed or rosemary and sage, and sometimes a purge as in a slow or putred fever, but never omit a vomit in the beginning—camphor and prickly ash bark are also good.

*A continual or putred Fever.* This fever of late has been the most common in New England, and the shortest in autumn. The symptoms are heaviness and dulness of the spirits—in the beginning, weariness of the limbs, cold shivering, thirst and restlessness, pain in the head or loins, and sometimes loathing and vomiting, and as the disease increases, severe watching and often delirium or phrenzy, a bad taste in the mouth, a rough tongue, a strong and quick pulse, urine high coloured, and as the distemper increases often comes on a diarrhœ or dysentary. This fever is continual, and the fit comes on every fourth day; nature endeavors to effect a cure every seventh day, but the bile being a viscid lentor, and this in the blood cannot be replaced in the liver, therefore nature cannot perform her office, and the bile putrefies in the gall bladder ; this putrefies the whole quantity of bile and affects the mass of blood and brings on death. The physicians name the fever by those symptoms which appear ; if nervous they call it a nervous fever ; if a dysentary happens, they call it the bloody flux ; if they live long before they die, they call it a slow fever ; if it happens to fall on the lungs, they call it a consumption ; so in the cure they make awkward work. They draw blisters, give hot medicines, which heat the blood and help on a putrefaction very fast ; and when they find that their patients do not get well by these, then among their hot doses they throw in acids, as spirit of vitriol, spirit of

sulphur, which thicken and coagulate the blood, and entirely prevents nature from throwing off the disease or fever, for the fever is occasioned by a thick lentor which this is making, and therefore death must ensue, if nature were ever so able to cure. But for a rational cure, at first give attenuants to divide and thin the blood, as diaphoretic antimony, native cinnabar, and mix one grain of tartar emetic with diaphoretic antimony, and give cream of tartar six grains at intervals, and then give a cathartic of the following mixture, calomel six grains, flour of sulphur two drachms, rhubarb one scruple, give it for one dose it being mixt ; but if the patient be weak, somewhat less of calomel. This is to be taken twice or more in the course of the fever, but never give working physic on the critical days, which happen every fourth or seventh day from the first seizure, or if you would use our own medicines give blood root twice a day, except the critical days, and let their tea be cooling and relaxing, as flax-seed, mallows, mullen, elder roots or flowers of spotted arsmart.

*A burning or inflammatory Fever* attacks the person with great fury and rage of excessive burning heat and thirst which is almost burning to the touch, and an inflammation of the bowels ; it is distinguished into three sorts, viz. *Liperia*, in which the inward parts burn and the outward parts are cold. The second assodes where the patient is continually uneasy and restless. The third elodus, wherein they sweat profusely without any benefit. These burning fevers will not come to their crisis except the heat be lowered by phlebotomy and cathartic, and likewise a softening and purging regimen.

*Nealenture* is a fever happening at sea ; the person thinks and imagines the sea to be green fields and will tumble overboard if not prevented, is delirious. In the treatment of this fever, bleeding and blistering ; the blister must be applied to the mould of the head to draw out the offending humors. All burning fevers are apt to prove mortal ; black urine is a bad sign, and bloody urine and spitting of blood are mortal signs. If the extreme parts are cold and the face red, it is a bad sign ;



a tremor turning to a delirium ends in death. Camphor is the diaphoretic in these burning fevers. The patient should not be kept too hot but temperate, and if he craves cold water, let him have it. His drink may be chiefly barley water with raisins and hartshorn well boiled in it. If there be an anxiety about the heart, it shows the fever to be malignant and must be treated with milder medicines.

*Of Slow Fevers.* These are continual and are caused by a peuant lymph which obstructs the glands in time if wrongly treated, are putred ; they have divers symptoms as a catarrh or corozza and cough hoarseness, they are usually best by day and worst by night ; they are divided into lymphatic and colliquative fevers—first because of a supposed salt in the blood, or second when the body is very much wasted by diarrhœe, or sweat, or by urine. Those fevers of the low kind are to be treated with warm medicines, such as diaphoretics and sodorifics and cordial medicines. Take ground ivy, penny-royal, sage, sarsaparilla and hyssop, make a tea; and take blood root, snake root and pettemorrel and make them into a powder, and take as much as will lie on the point of a pen knife.

*Malignant Fevers.* The sign is a remarkable loss of strength which comes on very suddenly and without any remarkable cause, and a weak pulse ; though the external parts are not so hot as in other fevers, yet the internal parts are rather hotter ; the skin is like that of a well person, the vision is often changed. The symptoms of these fevers differ in different persons and according to circumstances ; the blood becomes like yeast and will not coagulate if drawn. This fever sometimes causes a gangrene or mortification, and the very name of malignant fever is a terror to mankind. This fever is not to be treated with bleeding, it will always do mischief. A vomit is useful in the beginning, and then sweating medicines, as camphor, contrayerva, diaphoretic antimony and spirits of nitre dulce, spiritus sal volatil, &c. ; of our own medicines cardues benedictus, white snake root, prickly ash bark, sage, penny-royal and saffron.



*Of Spotted Fevers*, called the Petacial, is of the malignant kind, and the darker the spots the worse will be the case, and the redder the better. This fever raged in Germany, and the people were seized suddenly with great anxiety about the heart and stomach with a total loss of appetite ; pain and giddiness and excessive weakness, cold shiverings, and the pulse is always for the most part low with unquenchable thirst and red darkish spots. This distemper raged and was very mortal. The cure should always be undertaken with purging medicines and glisters. The venice thistle and diascordium is used; saffron and camphor are to be given, and in fine all fevers are in the cure to be begun with evacuation as the circumstances require, either vomit, purge or sweat ; but in all fevers all sour acids are to be avoided, for fear of coagulating the blood.

*Of Eruptive Fevers* or such as have the crisis come on by eruptions, as the small pox, measles, crysipelas, scarlet fever. Some advise bleeding, but others fear the propriety of it ; but as the scarlet fever is of the nature of measles, it should be treated in the same way, and for the crysipelas, nitre is the best dissolved in water and given inwardly, and to wash the outward part with warm milk.

*Of the Measels.* They come on with shivering and thirst, pain in the head and back, and sometimes with vomitings, then small red pimples come out, then increases, and a cough comes on ; as to the cure it needs no art, only to keep the patient in a common temperature of air neither too hot nor too cold, and give saffron or penny-royal to drive out the eruptions, and after the crisis to give some purge to carry off the putrefaction of the blood, though this is not to be given until the measles are wholly gone off. It is necessary to give laudnum or diascordium made without honey.

*The Small Pox.* This distemper differs in its appearance not much from the chicken pox at first, only the pustules are more red and angry. Dalus says that the seeds of the small pox are implanted in our nature and born with us and are set in motion by the communication of its flavor made by art and

drawn into our lungs, which impregnates the whole mass of blood with putrefaction, and forms pustules all over the body more or less as the putred matter is of the distemper. There are four different kinds, two distinct and two constant. The distinct and constant have both the same symptoms in the beginning, cold shivering pain in the head, back and limbs, and fever comes on and pustules appear on the face and breast and all over the body. These pustules are filled and begin to come off the eighth day in the distinct kind, but in the constant, the face swells and the pustules are little red pimples all close together, & often nervous symptoms come on as delirium, cramps, convulsions, pleuritic pains, coughs, asthmas, diarrhœes and dysenteries, and last of all death comes in for the relief of the poor victim. This distemper is to be undertaken with bleeding if the patient is plethoric and a vomit given, then saffron, snake root, sage and penny-royal may be given; but great care should be taken not to keep the patient too hot, for the disease is hot of itself; but as inoculations are chiefly used, I shall take notice how it is performed. First, the patient is to be dieted and kept very low for a fortnight and is not to drink any spirituous liquors during the time; he must be bled once and take one dose of weak calomel and rhubarb mixt; then take some of the morbid matter from a pustule of one who has the disorder or the distinct small pox and wet some lint with this matter, then make a small puncture with a lance and bind that on twenty-four hours; then take it off and if it is festered or begins to run, put on a cabbage leaf and change the dressing as it issues until the pustles appear, turn and suppurate. During this keep the patient as if well or in a temperate posture. Give once a day calomel five grains mixed with eight grains of diaphoretic antimony, or if you have not time to diet the patient, then give calomel and diaphoretic antimony thrice a day and rhubarb the fourth day, to carry off the morbid matter, or you may inoculate and give blood root, and every third day a portion of rhubarb or some other cathartic, &c.

*The Plague* is the most accute of all diseases, the most

mortal and most contagious ; it is not a fever, but causes a malignant fever by its taint and venom. This fever is pestilential, putred and malignant, which attends the plague. A great many symptoms are occasioned by it, as carbuncles, buboes, tubercles, purple and black spots on the head, phrenzy, &c. There are three sorts of it, the first are carbuncles or plague sores ; they run and sometimes destroy the limbs. The second are buboes in the groins, which are the most favorable symptoms. The third has blue spots on the breast, and these denote sudden death. All medicines that are good in fevers are useful in the plague ; smoaking tobacco is a preservative against catching it, and other malignant diseases occasioned by a corrupt air. Bleeding, vomiting and purging are observed to be hurtful ; but veniutrecle and anodynes are to be used ; calomel and snake root are good in proper doses ; blood root and snake root mixt and given three or four times a day are useful ; but after all these doses it is often mortal and baffles all medicines whatever. The buboes should be drawn to suppuration as should the carbuncles. The root of yellow lilies or the root of indian hemp, called milk weed, boiled in milk to poltice is useful to promote suppuration and malignant sores. Temperance is the only preventative against the plague. Washing clothes that are besmeared with sores is found to be very hurtful. The juice of lemons is used in the plague ; camphor is one of the best diaphoretic.

*The English Sweating sickness* which happened in the year 1485 and returned in 1506, 1517, 1528 and 1551 was very accute and swept all before it, and was sometimes so fatal as to carry off the patient affected with it in fifteen hours, and it was astonishing to physicians of those times, for it only affected the English. Others from different nations who where in England had it not, and some English fled to France and Holland to escape it, yet they had it there. This disease began with dizziness of the head and a vertigo, then profuse sweating followed, and the more means were used to check the disorder, the sooner the patient died ; at length it was found that sweat-

ing was the only remedy, and when a person was taken, if he was immediately confined to his bed and covered over, both head and face, and received sage, mustard seed and camphor, with some spirit which occasioned a sweat, in three hours the disease would be absent.

*Of a Quinsy.* Of this there are two sorts ; the first is what we commonly call the rattles, it comes on with difficulty of breathing, a dry cough, paleness of the face, the nerves and muscles are relaxed, and it often ends in death ; sometimes it is complicated with a dry caustic tumor, and is then called the throat distemper or canker ; this is an acute disease, and mostly affects children. It has been very mortal in this country. The cure must be undertaken with dulce mercury, five grains ; blood-root, three grains mixed in honey ; and to raise a spitting, take blood-root and vinegar of squills, repeat twice or thrice a day, and it will cause spitting and vomiting ; then give tincture and cortex peruvianus, a spoonful two or three times a day, they should be taken after the spitting is abated. The other kind is an inflammation of the throat, which gather into pus and affects a greater or less part, as sometimes it inflames the muscles of the tongue, at others the potale and tonsels, at others the uvala and the pharinx and their muscles, and sometimes the larinx and vesophegus, the ashyoides and wind-pipe ; the more the inflammation is spread, the greater is the danger of not obtaining a cure. There are divers expedients to be used, as much bleeding, sharp vomits, strong purges, hot fumes, a blister on the back of the neck, flax-seed tea or oil of linseed, mixed with neats foot oil, honey and urine, used internally, vomits in the beginning, and are the surest remedies ; but if the tumors are so far advanced as to come to suppuration, oily substances only are to be used until it breaks, and then spirit of vitriol, or vitriol should be used as a gurgle for the mouth.

*Pleurisy* is an inflammation of one or both lobes of the lungs, and is most subject to sanguine complexions. Those that are such should be bled in the beginning of the disease. It begins



with a cold fit, then heat and thirst, with pain in the side, which will sometimes reach the shoulder blade, and then comes on a continual cough and sometimes blood is raised. There are two kinds of this disease, viz : the true and the bastard pleurisy. If the pain is in both sides, it is accounted incurable ; if the lungs are only affected, and the pulse be strong, it is the true pleurisy ; but if the intercostal muscles are affected, it is called a bastard pleurisy or *periporomoni* ; if the pains come on in the beginning of the first or second day, and the spitting of blood begins, it is a good sign, and the fever will be short ; but if the pain in the side come on the fourth, fifth or sixth day, it is a bad sign or omen, and the disease will be mortal ; if the pulse be weak and low, and the person of a pale constitution, bleeding is not to be used ; a tea made of penny-royal, seneca, tansey and stone horse-dung is useful ; if the patient is in great pain, flax-seed boiled to a jelly, and one spoonful taken every four hours, and lay a blister on the side against the pain, is also good ; at the same time, the body must be kept open with gentle physic, no anodyne is to be given to ease the pain, for it prevents expectoration ; diuforet antimony and camphor is a sodorific. Sometimes pleurisies have no pain, but a strong hard pulse is to be felt, which shows an inflammation on the lungs, and requires the same remedy as those that have pain. If a pleurisy is followed by spitting of blood, an abcess is formed on some part of the thorax or cavity of the lungs, which gathers in the purse, and after some years, or at least one year, breaks and fills the vitals ; and if it be below the command of the breath, will suffocate the patient ; but if it is only at the bottom of the wind-pipe it will be thrown up ; when bleeding and purging are not sufficient to free the blood from its lentor or size, and expectoration has been wanting, the morbid matter will fall upon the lungs and form an ulcer, and the person will generally die of a consumption. The remedies to be applied are bleeding and expectorating medicines. In the true pleurisy, they are generally seized with a delirium, tremors, cramps and convulsions, in which case camphor and foetid



medicines are to be used, mixed with balsam, sulphur, oil, &c.

*An Empyema*, is a collection of purulent matter, gathered and collected, occasioned by a rupture of an abscess, often produced by a pleurisy or an inflammation of some part of the thorax. The symptoms of this are a dry cough, a weight on the diaphragm, unable to lie on one side, a slow fever, redness of the cheeks, hollowness of the eyes, heat of the fingers, and crookedness of the nails. This disease is difficult to cure. Expectoration is all the vent; therefore expectorants must be used, such as oil of lime or lint-seed oil, mallows, sarisuns, wound-wort boiled. If the pain in the side appears to be fixed, put on ascharotic, and cause an issue to be made, and if possible vent it through the skin.

Of a *Phrenetic* or *Phrenzy*. This is a continual delirium or dizziness of the brain, occasioned by an inflammation of its membranes, accompanied by a very acute continual fever. Another kind of delirium is occasioned by an inflammation of the diaphragm, and is called *paraphrenetis*. The cause of these disorders is found to be a translation of the feverish matter to the brain; and it may be observed, that not only the brain is inflamed, but all the animal spirits or nervous juices, which often causes tremor and convulsions, and this is vulgarly called a nervous fever. The cure is to be effected by strong purges, and by glisters and blisters applied to the back of the neck, strong cataplasms to the feet; camphor, musk and diaphoretic antimony are to be used; cream of tartar and nitre are also sometimes to be used; also the juice of lemons mixed with water, and a cake made like rose cake of poppy flowers may be applied to the head and temples. If in the beginning the person complains of a pain in the balls of the eyes, it is a fatal sign. This is a very mortal distemper, and often carries off the patient the third, fourth, or seven day. The signs of death are difficult breathing, sweats, grinding of the teeth, tremor of the limbs and tongue, &c.

*An inflammation of the stomach*. This is a most dangerous and acute disorder. It is attended with a burning fever, a

swelling at the pit of the stomach, and a pain in the stomach under the false ribs, and an unquenchable thirst, want of sleep and a continual watching ; then comes delirium, vomiting and convulsions, which end in death. They generally die the third or fourth day after they are seized. It differs from an inflammation of the liver, because the symptoms are more mild and not seated so deep as that of the liver ; but the cure must be alike in both cases. Bleeding and sweating, and strong poultices applied to the feet with blisters, &c.

*An inflammation of the intestines.* This happens often in the cholic and frequently ends in death. Sometimes a round tumor may be felt, and the patient has a violent pain, with fixed pusation, in some particular place, and a great distention ; the body is costive, with a fever, vomiting and fainting—and for the cure of it we *must not* use strong purges, but cooling medicines, such as elder roots, sarisoris wound wort root, mullen, mallows, spotted arsmart, all boiled in a gallon of water to one quart ; in this dissolve an ounce of salt petre and an ounce of glaubers salts. Let this be given every half hour if need requires, until it cool and relaxes the bowels.

*Of an inflammation of the Mesenterry.* Persons afflicted with these disorders, complain of pain in the back and brain, sometimes of the abdomen about the umbilical region, with gripes and some fever ; the pains come and go, having remissions ; these tumors form abcesses which suparate and break, and causes a shivering ; this is followed with some fever ; then the purulent matter is cast off by the stool. These tumors remain many years, being termed strumas ; the body gradually wastes away and breathing becomes more difficult and the patient is flatulent ; cathartics are next to be used, but glisters are useful and all viperine medicines, milipedes and all medicines which are used in chronical disorders and are attenuating and deobstruant.

*Of an inflammation of the Panereass.* This is a very accute disorder, producing watchings and faintings and other severe symptoms, which often terminate in an abcess, and the abcess

is often carried off by a flux of blood without coming to supuration ; therefore nature shews that purging is to be used, and sometimes bleeding, then a cool diet, and abstain from spirituous liquors and the disease will frequently yield.

*Of the inflammation of the Liver.* This is occasioned by an abcess of the liver, and is seldom attended with heavy pain in the right hypochondrium only as it tends to supuration, and then it is pungent with slow fever, and the patient is obliged to lie on his back continually, especially if he has a dry cough, it is dangerous and often ends in death. Sometimes it degenerates into a schorrous liver, or vents itself by stool, sometimes by urine, often by expectoration ; therefore the medicines are to be used, which promote those different evacuations, as milipedes and viperine medicines, but it usually degenerates into a consumption of the liver called thisis.

*Of an inflammation of the Spleen.* This differs not much from an inflammation of the liver, only this is on the left side, and the other on the right, but the cure is one and the same in both.

*Of distempers in the head.* In general it is observed that diseases in the head seem to have but one original cause, and differ only in degree. The causes are first a lentor or size of the humors ; the second is sharpness or tension of them whereby the fibres are hurt and depraved, therefore the distempers of the head arise from abundance of sisy and viscious humors as their principle cause. There are various distempers of this kind even from the severest apoplexy ; to these we may refer the fits of hysteric and hypochondriac persons as spasms, contractions and convulsions of the muscles. These are owing to a stimulant cause occasioned by an acrimony of the fluids, which being acid, thickens and obstructs the circulation and causes those violent symptoms of the nervous kind ; and to remedy which we are to attenuate the sizeness of the fluids and to open the obstruction of the vessels to abate the acrimony of the humors, to dissolve the coagulation, to break the specalu and restore to the solids their healthy tone, &c. but we must not use bracers until we have destroyed the lentor of the blood and re-

moved the obstructions of the vessels. To dissolve the lensor take blood root, snake root and mustard seed, each two spoonfuls in fine powder with half an ounce of salt petre ; put these into a pint of clear water and add half pint of spirit and of mixture take a spoonful twice a day, then after three days give working physic, as jalap, the juice of blue flour de luce, which is much the best for nervous disorders ; then when the disease is removed by dissolving its attenuants, to brace the solids give peruvian bark, in powder of the bark of sloe root or bears bate called fungus, in powder mixt with brandy or wine, or a tea of sarsaparilla, crane's bill root and rue.

*Of the Head Ache.* Of this are divers kinds or sorts, as the sick head ache, which is often hereditary, and is occasioned by a thick close skull, and when the stomach is full and gathers great heat it fumes to the head and causes an inveterate head ache, which going back to the stomach occasions vomiting, and after that a little sleep cools and settles the constitution, and the person is well. It often prevents other diseases as fevers and the like. Bohea tea often mitigates it by its bracing and drying quality. There is also a nervous head ache, that often degenerates into an apoplexy or a palsy. These come by fits, and are sometimes on the back part of the head or in the balls of the eyes, &c. these should be cured by bleeding ; and those medicines which are used in nervous disorders, such as a simple head ache in a person otherwise well, take a cloth wet in vinegar and put it round the neck cold, and in two or three times repeating it will ease, but the usual and safest method is to give camphor and the juice of ground ivy ; let them be used as snuff and take them likewise internally ; then if it continues long take a cathartic, let the tea be sage and rosemary.

Too much watching, or want of sleep, commonly depends on some other disorder ; melancholy and mad people often abide the longest without sleep ; and old people that want sleep, opiates and anodynes are very improper, and are not to be used, but give aromatics.



*Of sleepy distempers*, as a coma or cataptiora, a lethargy and a carus ; all are sleepy disorders, only that they differ in degree, but proceed from the same cause—that is, a phlegm or tough mucus collected in the brain. A coma, is a deep sleep, from which the person may be roused, open his eyes and answer, and then fall into his sleep again. A lethargy is similar to a coma, only with the addition of a delirium ; a carus is a more profound sleep, without a fever, and is a near approach to an apoplexy. These disorders should be cured with strong vomits and purges ; put a plaster of turpentine and pulverized mustard-seed on the back of the neck, blow the powder of the white helebore up the nose to cause sneezing ; apply blisters on the wrists and ankles, give a tea-spoonful of jalap in fine powder, and apply strong poultices to the feet and volatiles to the nose.

*Of a Vertigo*. This is a disorder of the head, and every thing has the appearance of turning round. If the disorder is seated in the fore part of the head, it is easily cured ; but if in the back part of the head it is dangerous, and often degenerates into an apoplexy. The person in this case, if he rise suddenly off his seat, will fall back again ; sometimes he will have warning of it by a heaviness of the head. There are three sorts, but they differ only in degree ; the first is only swimming in the head ; the second every thing turns round ; and the third, when the person attempts to rise suddenly, he falls down again ; the optic nerves are chiefly affected. If the disease be plethoric, bleed him, give a vomit the next day ; take sage, rosemary, penny-royal, and mustard seed, make a tea and drink plentifully every night ; then take piney-root, sweet flag-root and saffron, beat them together to a powder, take as much as will lie on the point of a pen-knife, every morning ; then if the disease will not yield, after some days, draw a blister on the neck, and give the juice of wild fluor de luce.

*Of an Apoplexy*. This is the worst of all nervous disorders ; when the person is seized with it, he falls suddenly down,



speechless and senseless, without motion or respiration ; yet the pulse continues to beat ; the person looks fresh coloured, with moist eyes, breathes with a snorting noise, and at length has a cold sweat ; it however soon degenerates into a palsy and gathers into one side. The occasion of it is, thick lentor of the nervous juice, which clogs the brain. There are two kinds of this disease ; the first a sanguine, the second a pituitous or phlegmatic apoplexy ; but neither of them are very pleasant. To distinguish them, it is to be observed, that in the phlegmatic, the patient seems to be choked with phlegm, looks pale in the face, the face is not bloated nor the pulse very high ; but in the sanguine, the patient breathes easy, with very little noise, as if asleep ; a red bloated face, and a very strong pulse ; at length suffocation causes death, by the choking of the vessels with the phlegm. Bleeding either kills or cures, according to Hyppoerates. But in the cure, all evacuations are necessary ; yet sometimes if the patient be weak, they increase the disease and often hasten death. Sneezing powders, vomits, strong purges and sharp glisters are to be used, as far as the strength of the patient will allow. The symptoms of an apoplexy are, a vertigo, a fulness of the vessels and failure of the memory, dimness of sight, spontaneous tears, the incubus, a frequent pain in the head, a numbness of the arms and legs, by fits, &c. An apoplexy is generally hereditary. To prevent as well as to cure, give sage, rosemary, mustard-seed, and ground ivy ; in the fit, a blister should be put on the back of the neck or a cupping glass ; a strong poultice to the feet. An hemiphlegia, is a kind of apoplexy, which affects only half the head and body ; it is similar to an apoplexy, but is not so numb as a palsy ; the cure is the same. Those that die of an apoplexy should not be buried immediately, but kept two or three days, for in that time all the humors are moved, and some have revived and come too after they have been supposed to be dead. In those that die of an apoplexy, it is observed that the vessels of the brain are loaded with a thick lymph, and all the vessels are full of thick scum,

and sometimes large tumors are observed in the brain ; therefore we should give blood-root to attenuate this scum, even in the fit, and before if possible ; for all nervous disorders require nearly the same mode of cure.

*Of Hemiplegia, Paraphlegia Paraploa.* These are all a species of the apoplexy, and often affects the whole body, the head excepted ; they are sometimes called a palsy, but are very different, as will appear under that head. These are cured as an apoplexy, by vomiting, bleeding and blisters.

*Of a Paralysis and Paresis.* These are one and the same disease, and differ only in degree, and is what we call the palsy or numb palsy. This is sometimes on the nerves, and relaxes them, and causes them to loose their tone ; the part affected will loose its motion, and retain its feeling ; sometimes they loose both motion and feeling. The palsy often affects the larynx, gullet and epiglottis, and prevents swallowing. It is seldom or never cured ; if it be on the nerves, give nervous medicines, such as mustard-seed, sage, pennyroyal, and sundue ; but if it benumbs, rub the limbs with biting arsmart, and whip them with nettles ; put strong blisters on the part affected, and give working physic, jalap, or the juice of wild fluor de luce ; the juice of sage is to be taken often for the palsy of the tongue, as it will sometimes restore the speech ; bleeding may sometimes be used in the lame side ; mercury is also useful ; but blood-root mixed with camphor is better ; but above all, blood-root, and draggon-root and snake-root, in fine powder, mixed in equal quantities and given in a tea of sage every six hours, with the addition of mustard-seed and pennyroyal, in the sum of a tea spoonful, and it will be found a sovereign remedy for the above disease.

*Of Tremor, or shaking of the limbs,* called the shaking palsy. This, in old people, is incurable ; those are generally affected with it who indulge in habits of intoxication. It appears to be occasioned by too much dryness of the animal juices ; therefore medicines should be used which are restorative, and good in nervous disorders ; such as sow-bugs, vipers' flesh and

snails, castor and ground ivy ; those who work in mines are subject to this disease ; and likewise too much venery occasions it, especially in old men.

*Of Convulsions or contractions.* This is generally called a torturous. Of this sort is that called a spasmus cynicure, when both sides of the mouth are drawn away like the grinning of a dog ; or when only one side is drawn away, it is called torturous. All convulsions, either of a part or of the whole of the body, are cured in one and the same way. You must use piony-root, castor, musk, the root of indian hemp, sage, mustard-seed, horse-radish and camphor ; but if the convulsive motion proceeds from some other disorder, such as fever or cholics or worms, &c. it will not be cured until the other disorder is removed.

*Of the Hickups, or singlutus.* This is a convulsive motion of the diaphragm. *Note.* Sneezing coming on a person, the hickups will immediately stop it, because it is a spasmodic affection and contrary to it. When the hickups continue for days, weeks or months, and if it arises from some other cause, that must be removed first ; but if it be a primary disease, give a vomit, and after it has operated, you may give some anodyne, and if that fails, give burdock-seed, mustard-seed, and dragon root in fine powder, mix these, and give a tea-spoonful three times a day, and give sneezing powder once a day, of white hellebore-root.

*Sneezing.* This is a convulsive motion of the muscles, and serves for expectoration, and is beneficial to shake the solids and promote circulation ; but when too much, it becomes a disease ; to prevent which you must use as a snuff, the very fine powders of comfrey or any mucilaginous substance. This disease is seldom very troublesome.

*An Epilepsy.* This is a convulsive motion of the whole body. There are three degrees of this disease ; in the first, the person is suddenly struck all over at once with dizziness and loss of motion, and often falls quite down, but retains his senses, and in a few moments comes too again. In the second,

the senses are hurried into a delirium, the person sings and dances, weeps and laughs, talks rediculously, bawls, strikes his breast, and sometimes after he comes out of his fit, he remembers all that was done, and sometimes he does not. In the third, all the use of both sense and reason are gone, the person soon falls upon the ground, gnashing with his teeth, froths at the mouth, bites his lips and tongue, and as the fit remits, he lays as if asleep, and when he comes too knows nothing that has occurred, but complains of numbness or dullness in the head. The epilepsy is often governed by the moon, and the fits come on at the change of the moon. This disorder is hard to cure, and often hurts the brain, and takes away the senses of the person. Those that are seized with it after they arrive at the age of twenty-five years, are accounted incurable ; if it comes on after some disease, it is seldom cured ; but if it proceeds from some fault of the stomach, it is cured by taking away the cause ; if a fit of the ague comes on, it will generally cure the epilepsy. The cure is to be undertaken with a vomit and purge, with mercurius dulcis mixed with them ; or take two spoonfuls of the juice of wild fluor de luce, just before the coming on of a fit, if the time be known by the moon ; but if not at the full and change, repeat it three or four times, then take spirit of castor three ounces, asafœtida one drachm, dissolve it in the spirit of oil of amber, ten drops water of briony, two ounces syrup, of buck thorn two ounces, musk one grain, mix all these together and give the patient from fifteen to twenty-five drops at a time, as he is able to bear, two or three times a day. This medicine has performed wonders, as I can attest by my experience for many years. Let the drops be taken in a tea made of indian hemp root and rue, and what we call *fit root*, and piony-root ; bleeding is seldom of any use, and it may do hurt by weakening the patient, so that he cannot bear the other medicines ; to rouse a person out of the fit, take dry tobacco, fine brimstone, dry wormwood and sage, mix all together, and put it in a tobacco pipe, then put the stem into one nostril and stop the other, blow the smoke into the head, and



it will immediately rouse him out of the fit. I have known some who have been treated in this manner that have never had another fit afterwards. A great deal has been written on this disease, yet all must acknowledge that it is often incurable, and holds a person through life ; but it seldom kills, except in children and infants ; sometimes it causes them to fall into the fire or water, and thus their lives are ended.

*Chorea Saniti Viti*, or *St. Vitus Dance*. This disorder is of the convulsive kind, and most subject to young persons. It affects the limbs, either one arm or leg, which they cannot hold still, and sometimes it is so that a strong man cannot hold the limb of a small boy which is convulsed. As to the cure, some order repeated bleedings and purging ; but I have cured several without practising this ; only give a purge of the juice of wild fluor de luce, then take a dose of camphor and dissolve it in spirits, you must then take a small quantity of the camphor and put blood-root into the same spirit, and give a teaspoonful twice a day, (after purging) in the morning and at night ; then give a tea of sage, and rue, and pennyroyal, this generally cures in three or four days ; but if it return again, repeat the same dose, for it will sometimes return again the next year, about the same season.

*Hypochondria or Hysterie Passion*. These disorders are most common to women and imitate almost all diseases ; they complain of almost every thing ; although all have not the same complaints. They complain of a beating in their side, palpitation of the heart, which comes by fits, a rising and choking ; some have pain in their head or in their stomach or side, are timorous and think their cause to be mortal, though it is not so ; others again are in a profound melancholy, and in others it moves in the head, makes them appear as if intoxicated. They sometimes have fits like ague or hot sweats, and faintness comes on them ; but to describe all the symptoms is impossible, they are varied according to the temper and constitution of the patient and the circumstances of his living ; but all that can give rest or relief is to give things to strengthen the blood, and after



all it is usually a great while wearing away, and in old persons it seldom ever leaves them until death comes to perform his work. If a person gives way to this disorder as he is apt to do, and lays by exercise, he often falls into the scurvy or jaundice, which in time either kills her or degenerates into a consumption. Filings of iron steeped in wine, sundue, gold thread, rue, hemp seed, burdock seed, and mustard seed pulverized and put into brandy is an excellent medicine in cold phlegmatic constitutions, and where the case has been of long standing; if the disease rises so as to occasion convulsions, there will be a rolling or tumbling felt in the abdomen or lower belly, and frequently a gulping up of wind, a grumbling of wind in the hypochondria. After a giddiness of the head, and as the symptoms increase, they have fainting fits, are forgetful and amazed, will laugh and cry and wholly loose their senses, their limbs will be convulsive; but they seldom froath at the mouth or have their eyes drawn as in the epilepsy. These hypochondriac or hysteric fits differ according to the complexion of the patient; therefore the medicine that will help one will hurt the other. Sanguine persons cannot bear spirit or cordial, but must have such as tend to quench in some degree the animal spirits, which are crowding along in heaps, as asafœtida, castor and all foeted medicines used in pills, with aloes and myrrh, be given as an attenuative every night; but if the person be pale, of a cold phlegmatic constitution, then give *ens. veneris* and a preparation of steel is good dissolved; also *ens. veneris* given in powder two or three grains at a time every morning, and a tea of rue, sage, penny-royal and sweet flag root in brandy is good. Hysteric women generally obtain their disease by taking cold in their feet, which stops their menses or courses, and in a few months brings on spasms occasioned by a suffocation of the womb. These fits are exceedingly violent and will not be cured until the woman is brought to order again; therefore give two spoonfuls of the juice of wild fluor de luce. This I have known given between the fits, and it may be repeated. It will not work much until the fits abate, as it does on well persons;

but will check and cure the fits and bring the woman into order. This I have proved by my own experience many times. The juice of wild fluor de luce mixed with half brandy and blood root in powder, a spoonful every morning, given to a phlegmatic girl, will bring her into order and cure the fits coming from that cause ; but if the fits happen from some other cause, as too much relaxation, which I have often seen, and at the same time the woman have her menses once a fortnight or in three weeks; then I cure them with the peruvian bark, sloe root bark or the fungus, called bears bate.

*Of a failure of memory.* This is a disease which the philosophers are at the greatest loss to account for, as it often happens before an apoplexy or palsy or some violent nervous disorder, and such diseases often leave people in a depraved habit and lost memory. It also is remarkable in old people who have partly lost their memory, and is not so good as in their younger years. It seems to happen by the languor of the nerves ; for as the body grows weak by want of heat in old age and the solids are relaxed, so the nervous juices not being kept up to their full standard by uterial heat, fail in strength, then first the optic nerves shew it by the dimness of the sight, then the memory next fails in some more or less. This disease is hard to cure, but when brought on by other diseases, it is to be helped by raising the heat of the blood, by vipers flesh and spices in powder dissolved in wine ; rosemerry, sage, mustard seed and sundue are good to quicken the memory, to preserve and help it when lost.

N. B. Too much venery in old men is apt to weaken the nervous juices and thereby the memory is hurt ; also the too frequent use of spirituous liquors operates in the same way on the brain. The head of all the nerves is the brain, and the brain is therefore the seat of the memory. Weakening the brain must weaken the memory as much by inflaming spirit as nervous diseases.

*Distempers of the Mind.* These do not come properly under notice of a physician, only as they proceed from disorders

of the body. All passions of the mind affect the body, as anger, grief, love, malice, &c.; so diseases often affect the mind, as pain, hunger, cold, heat, thirst, &c. which inconveniences being removed from the body, the mind is at ease; which, when the cause is removed or taken away, will leave the mind and body at rest or in health, which before was suffering by that disease. The passion of love will often bring on a quick consumption and destroy the body, which cannot be cured only by the object of its desire; therefore the physician may labor in vain in that disease with medicine.

*Madness and Melancholy* are both one and the same disease; for melancholy often degenerates into madness, and madness is often turned into melancholy. If the disease begin and keep on the spleen, the person remains in a melancholy posture; but if it removes from the spleen to the brain, he is immediately so mad a man that he must be confined; but if it moves from the brain to the spleen, he becomes melancholy—and melancholy is a delirium without fever; with fear and sorrow, they have a continual hatred of those about them, and imagine every body against them. They shed tears and make complaints without a cause, and are often in fear of coming to want or of starving, and will not eat on that account. Their countenances are pale and body feeble. When the distemper advances to a great degree, they imagine themselves beasts, or that they are dead, and will not eat food, thinking themselves to be really so; but the delirium is different in various people, according to the violence of the cause. Some are seized with anger and will often destroy themselves; others are more mild and will complain of impossibilities to be effected; some will wander about in the night in solitary places as among the tombs, and this sort of melancholy is called the physician's cross or scourge, or reproach, because it baffles his skill by the force of medicine. Those who are melancholy are always thinking of one object night and day. When it is degenerated into madness, they are often cheerful, will laugh, talk, sing, dance, and even account themselves kings, prophets or priests, often rav-

ing mad and all reason is laid aside. They do not sometimes sleep for months, are furious, have a prodigious strength and wonderful disposition to bear cold. In the cure of such stubborn diseases, notice is to be taken of the strength of the patient, his constitution and the heat of the blood ; the more raving the patient is, the easier will be the cure. He must be kept in a room quite dark, and his blood often lowered. Give him strong vomits of tartar emetic—but I have cured some with our white hellebore in fine powder, giving a spoonful at a dose ; it works well, a large tea spoonful of jalap operated up and down upon a woman about fifty times and entirely cured her ; she was of a strong constitution and raving mad. Vomits and antimonials are to begin the cure, and black hellebore as a purge was accounted a specific among the attenuants, and now strong rough physic is the cause of the whole cure. If the pulse be strong and the heat of the blood be great, the patient in this case is usually raving, for the cause lodges on the glands. If the pulse be low and creeping and the patient not very furious, with a little talking to himself, speaking ridiculously and forgetfully, it is to be feared that this delirium is occasioned by some hidden cause of the mind, as love or some other passion ; therefore to weaken the body with bleeding and physic, and keeping the patient from strong food, will only make the disease worse, and throw the patient into a consumption. It is often incurable and must be treated with gentle medicines and moderate exercise ; but in a profound melancholy black hellebore, blood root, hemp seed and ground ivy are very useful, together with the juice of wild fluor de luce taken about the change of the moon for three months at a time. Melancholy is often caused by a disorder of the womb or hypochondria, and therefore it is mixt with those diseases and should be treated as they are in some measure—but with strong cathartics.

*Of a Rabes, or Hydrophobia.* This is a sort of madness communicated by the bite of a mad dog or the saliva of some animal which is in rage with this disease. It does not come on immediately after the bite, sometimes for a year or more, but



is usually followed in forty days after the hurt. The signs of its coming on are uneasiness, interrupted sleep, a weight at the stomach, stretching, gaping and soon angry. At length they abhorre all kinds of drink, soon become raving mad with anger, which increases with rage ; they will tear, bite and kill all they come to ; will bark and howl like dogs or other beasts, and at length die in rage. This poison is very strong, yet the wound will easily heal, but the venom falls on the animal juices—this disease is subject to all animals, both man and beast ; the cure is difficult after the madness has come on, but as soon as it has come on, or soon as one is bit, it may be drawn out with many things, as onions beat up with salt and applied to the wound, jalap pounded and put on and often shifted till the saliva be drawn out. Give internally snake root, camphor, carduus benedictus ; some burn the place with a hot iron, others apply a cupping glass on the part, &c. All that have a great dread of water die of this disorder or disease ; if you force drink into them they die the sooner.

*Of Tarantism.* This is the disease occasioned by the bite of a tarantula, a large species of spider with seven legs. It is found in Apulice, in Italy, but not known here. This poison affects the animal spirits, and as the hydrophobia affects the brain and spleen with rage and madness, so this affects the spleen with melancholy and gives hurt to the animal spirits or juices. But the cure is performed with cordials and music, which will carry it off only by raising sunken spirits of the patient. There was a case of this kind that made its appearance in the State of Rhode Island. A girl was bitten on the hand by a very large spider, which by the description given of the disorder by able physicians who attended her, appeared to be of the tarantula kind.

*Of an Incubus or Night Mare.* This fit takes people in their sleep and mostly when they lie on their backs or have eaten a supper that is hard of digestion. They are greatly oppressed at their stomach, as if a great weight were placed on their breasts which deceives them, that they cannot stir ; but after



a while it goes off and leaves them trembling, and the person comes too again. This disease is not mortal, though by some it is supposed to be ; however, it often degenerates into an epilepsy or apoplexy. The cure is, to live temperate and eat light suppers and use antistatulents, as annis seed, burdock seed, fennel seed and mustard seed steeped in spirit and given at night.

*Of a catarrhus disorder*, that is, a catarrh, a branchus, a coriza and a hoarsness, all are a defluxion of rheum. First, when it falls on the breast, it is called a catarrh; if it falls about the throat a branchus or hoarsness ; if of the nose, a coriza or rheum. A catarrh is a defluxion of rheum thrown out of the blood, being vitiated serum and is attended with heaviness of the head ; sometimes with a fever. It is cold, discharging thick matter, or hot, discharging thin watery matter at the nose ; the cure must be begun with aromatics, as cinnamon, spices, sarsaparilla, sarsafra, fever bush, black-berry root made into a tea and drank. But the one most common amongst us is catarrhus suffocations or suffocating catarrh ; it comes on suddenly and is caused by the satire lymph of the blood ; is very acute and often threatens instant death, is generally called a quinzy, but differs much from it, as the person on a sudden is almost choked with a dry cough, and often in an hour becomes speechless, and his respiration is with great difficulty. All remedies are to be instantly used, and evacuations made, such as blisters applied between the shoulders, poultices to the feet, and a vomit ; bleeding, blood root and honey often in vinegar of squills if the fit abates ; it will often relapse ; to prevent it, use blood root and honey which is the only remedy. There is another kind of suffocating catarrh in which the blood stagnates in the lungs and death soon ensues. It is occasioned by some polypus in the heart or great blood vessels, and is attended with a heavy pain of the breast, short difficult breathing, and low voice. In this case it is necessary that something should be performed as soon as possible. Spermaceti, linseed oil and

diaphoretic antimony given liberally, but above all the grease of the viper or of the rattle-snake is the best remedy.

*A Cough.* This is common in these cold climates, but depends on different causes and proceeds from different parts. When a person has a cough let him take a long breath, and if it makes him cough, then the cough comes from the lungs, and they are affected; but if not, it is only in the stomach, occasioned by humors being lodged there. If the cough comes from the stomach it is almost perpetual and dry, nothing raised but with the utmost difficulty. All coughs that are dry at first become moist in a short time. A moist stomach cough is cured by emetics, elix. proprietatus, bals. peru, bals. hancmetac mixed with honey is a superior medicine. For a dry cough, use flaxseed tea, oil of lintseed mixed with honey, liquorice and lungwort, ground ivy, elecampane and horehound made into a syrup, is a most noble medicine for an obstinate cough. Coughs are sometimes epidemical and are attended with some fever, and this must be corrected. I have known coughs cured several times by drawing blisters on the ancles, by a syrup of garlic.

*Consumption of the lungs.* This is commonly occasioned by humors falling down into the lungs, by which in process of time an ulcer is formed; the symptoms are a cough, &c. when that is raised it is said to be incurable. But we must try for a cure according to the best of our abilities and skill, therefore, in the beginning, take the defluxion from the lungs before the ulcer is formed. You must use phlebotomy, a gentle cathartic, as ipicachuanha or rhubarb, and then let the patient live on a milk diet and take thickening medicines, such as comfrey, solomon seal, mallows, and ground ivy, but if the disease be far advanced, then night sweats will come on and an ulcer be formed, also a cough and raising of blood at times. The matter coughed up, if spit into water, will sink to the bottom. The patient cannot lie only on one side by reason of the other lobe of the lungs riding or bearing on the ulcer. Riding horseback is a good restorative in all consumptions of the lungs

An hectic fever attends most consumptions of the lungs. A topical consumption is drying away part of the whole body, whereby the blood and juices are dried away. In this only nourishing medicines must be used, and finally in almost all consumptions. Strong purges are to be avoided. Almost all parts of the body are liable to be attacked by consumption, as the liver, kidneys, mesentary, &c. Those who have a consumption of the mesentary, have pain about the belly, and knobs are to be felt in the abdomen and about the navel. The sign of a hectic fever are night sweats, redness of one cheek or red spot on one cheek once a day, the urine has a kind of oil on it like a spider's web. If any person even suspects himself tending towards a consumption, he may smoke tobacco and colt's foot two or three times a day; spts. of sulphur mixed with conserve of red roses is an excellent medicine in all ulcers of the lungs, and it may be used with others as occasion requires. A consumption is most likely to prove mortal when it happens between eighteen and twenty five years of age, and is often hereditary, and whole families fall a sacrifice to it. It is communicated to one another by lodging together in the same bed, or by wearing the same apparel, though not very often. If a spitting of blood comes on you may give runnet, but the cure is difficult at last. A nervous consumption is when they waste away without fever, cough or any shortening of the breath; the appetite fails, but the stomach performs its office, the strength is exhausted and the body is reduced to nothing but skin and bones. It often happens to old rum drinkers, they look pale, loath every kind of food and drink except that which is very strong and impregnated with spirit. The urine diminishes and is high colored, but in some it is not. This disease is often occasioned by crudities, and the more balsamic part is dried away by hot spirituous liquids. This distemper is chronicle, and cannot be cured, unless it is in the beginning; but it usually degenerates into a dropsy—it may however proceed from grief or love, but then it is hard to cure. There are other sorts of consumption which are occasioned by other distempers,

such as an hemorrhage or too much bleeding, a gonorrhœa, the fluor albus, a diarrhœtic dysentery, scrofula or asthmatic disorder, hypochondria, hysteric, spitting of blood, obstructed menses, a pleurisy or by the jaundice, &c. In all these consumptions regard is to be had to the primary cause, and all medicines given accordingly. Restoratives are to be used to prevent the waste of the solids and for digestion. The patient may ride horse-back, and he may frequently eat shell fish, such as oysters, lobsters and clams during the cure. A skilful physician will and must take notice of many things, for it will not do to use all consumptions alike.

*Of a vomica of the lungs.* This is bred without much trouble, pain, cough or fever. Sometimes before it breaks, hoarseness or shortness of breath comes on, but not always. This vomica or abcess is a pustule of matter, which, when it breaks below the command of the breath, suffocates the patient instantly, the lungs being filled with purulent matter. It often breaks so high as to be thrown out by expectoration, and thus the ulcer is discharged, and the patient lives sometime. A person affected with vomica has a pain in his side, but the disease being incurable, it seldom comes under the consideration of a physician except it breaks and expectorates, then give deterging medicines as bals. peru, bals. fir, oil of turpentine, honey and liquorice.

*Of an Asthma.* This is a difficulty of breathing, occasioned by divers impediments in the lungs. It is divided into two sorts, continual and periodical. The continual is often hereditary, and affects children when young, and leaves them as they grow up, and returns as they grow old; then it is incurable. It happens often from dropsy of the breast, an abcess or from obesity, or flatulent tumors of the lungs. This continual asthma is worse in summer than in winter, and the cure cannot be performed if the person lives high or drinks any spirituous liquors, or lies in a warm feather bed; many are obliged to sit up night and day and cannot sleep on a bed. But such as camp abroad or sleep with their feet to the fire, live on small fare,



drink water or coffee for diet drink, and by so doing the asthma will leave them. They may use attenuants and expectorants, such as liquorice, elecampane, ground ivy, &c. for if the asthma is not moist and considerable matter raised, it may degenerate into a consumption or suffocate the patient ; but the moister it is and the more there is raised the less danger there is to be apprehended. The periodical is of a different nature, is generally dry and affects children, and often times adults. It comes by fits, sometimes regular, in about ten days, and often irregular once or twice a year. These fits are a kind of catarrh, and bleeding may give present ease, but is dangerous ; a vomit is to be given immediately, then cooling medicines which are apparent and detergent, such as vinegar of squills, blood-root, &c. ; the fit will be over in a few hours if the patient can be prevented from suffocating, which may be done by a vomit ; then give oils, honey, &c. Children that are seemingly well when they go to bed will often wake as if strangling with a dry cough and striving for breath, which very much surprises the mother, who call it the quincy, but it is an asthma, for the child looks red in the face and not pale as in the catarrhus, suffocations, &c.

*Distempers of the heart.* It is certain that the heart is subject to an inflammation, as it has many times appeared after dissection and ulcers. Stones and worms have been found in the heart, and the pericardium or heart-case often grows fast to the heart ; therefore a person may live sometime, though his heart be partly ulcerated. The palpitation of the heart is a convulsive motion, which is easily felt, and sometimes seen or even heard, when this happens from watery excrescences in the heart or worms in the ventricles and pericardium, an abscess or stones in the heart, and is generally incurable. But if it happens from the scurvy, hysterics or hypochondria affections, it is often cured. Anodynes and bleeding are not good ; bleeding will help it, but the help will be only momentary ; therefore the cure must be by volatiles, oil of camphor, oil of anis, oil of cinnamon, castor, asafoetida, &c.

*Trembling of the heart.* In this disease the pulse is unequal and languid; it is very seldom a primary disease; but depends on some other, therefore this must be found out, which, when taken away, the tremor ceases.

*Of a Leipothymia, Syncope and an Asphyxia.* These three maladies differ only in degree. A leipothymia is a great languor of the spirits. A syncope is a swooning away, and an asphyxia is not only fainting away, but the pulse ceases altogether, the hands are closely shut, the face pale, in a cold sweat, and the patient looks like one dead. The remedy is spts. sal vol, aromatics and sternutatories applied to the nose.

*Of a polypus of the heart.* This is found in the nose as well as in the cavity of the heart. It is called a polypus from the resemblance it has to a fish of that name. When persons die suddenly, it is generally thought they die of a polypus of the heart.

*Of diseases of the stomach*—and crudities and sourness of the stomach, causing heart-burn and sour belchings. These are cured by volatiles, jelly of hearts-horn, chalk made into conserve with whortle-berries, being moistened with fresh butter; oat-meal is useful in this disease; but all salt and sour things are very hurtful. The heart-burn of a woman in the first months of pregnancy is not to be cured nor attempted—others may have a vomit and then volatiles; but when a crudity of the stomach occasions its contents to become unsavory and unfit for nourishment, and putred belchings arise with a kind of rotten or bitter taste in the morning, this is occasioned by indigestion—but more often by unwholesome diet, as eating meat and divers sorts of food for supper at the same time, and more than can be digested, or by eating too much oily food which blunts the appetite and prevents digestion. Cure—the patient must live very low for some time as in a salivation. You may give a vomit of ipicach first, and then use the antiphlogistic regimen, that is, water gruel, with very little salt, and no spirituous liquors used. When it seems to be gone, let the patient come to this to eat when he is hungry and to drink when he is dry,

and he will be perfectly well. But the want of digestion or indigestion may be helped by bitters infused in wine or cider ; camomile flowers, juniper-berries, gentian, &c. are a common bitter, but our bitters are the best, such as gold thread, rue, burdock-seed, seneca leaves, &c. sometimes wormwood ; bitters are better in water than in rum, for all hot spirits hurt digestion, unless the constitution is phlegmatic.

*Of a Nausea and Vomiting.* This is not dangerous unless it continues too long ; but there is a vomiting occasioned by the cholic, which cannot be stopped until the disease abates and a vomiting occasioned by the hysteric or hypochondria, which is very furious, and this sometimes affects pregnant women in time of travel. This vomiting is easily helped by a root called ladies slipper ; this taken, immediately stops the vomiting. There is sometimes a vomiting of blood, which is very dangerous and it must be stopped. Some have died suddenly, that is, bled to death ; to stop it, use bals. armoniac, dragon root blood, yarrow, nettles, johnswort, comfrey-root, solomon seal root, crain's bill root, cureall, &c. make these into a tea and drink without sweetening, or take allum and malt in the mouth and swallow it, this will prevent, and to prevent its occurring again smoke coltsfoot two or three times a day. The anxiety of the heart is a great pain in the stomach ; it always arises from the left orifice of the stomach. The cardialgia or heart burn is cured with vomit first, as described above. Anorexia or loss of appetite is to be helped with bitters ; a malicia is too great an appetite, and pia is an appetite for unusual things, and often brings on a chlorosis or green sickness in virgins ; it often happens to pregnant women, and they will eat coals, cinders, chalk, lime, &c. but it is not so hurtful to them as to young women ; it is cured by eating sarsaparilla once or twice a day, and taking bitters in the morning or learning to chew tobacco, which will entirely cure such an appetite. A canine appetite is frequently attended with vomiting, and more often with diarrhoea ; fat food and bitters are to be used.

*A Surfeit or Crepula,* is an over heat or division of the

juices of the body occasioned by eating too much or by drinking too much, by over-heating exercise, by intemperance, unwholesome food, by drinking too much cold water, and is attended with breaking out on the skin in scales, pimples, blotches, &c. The cure is to be begun and carried on with a light milk diet, gentle physic, &c. The drink must be beer made of malt, spruce, sarsaparilla or sassafras roots. Cholera morbus is a discharge of the body both up and down with extreme griping pain and thirst, spasms, and cramps in the limbs or trunk of the body. The stools are first white and then yellow, blue or black. Cure—let an anodyne be given, make a fresh broth of fowl, and he may drink of it as if he had been taking physic. If it is extreme give him three or four glisters; it is often mortal; but glisters, anodynes and diaphoretics gently produce a cure; cathartics are not good, they cause a vomiting of bile and kill. The root of sarison's wound wort is useful.

*Costiveness* is the cause of many complaints. It usually happens to splenetic, nephritic and hysteric persons—oily substances is the best, but not working physic, for it leaves them worse than it found them. Oil of lin, flaxseed, mallows, sarison's wound wort, and all mucilaginous substances are to be used; for diet, fresh meat broth and all cooling berries, as whortle-berries, black-berries, cram-berries; if the patient has an inward fever, he may also use turnips, pumpkins, beans and peas; but all things should be eaten fresh, for salt is not good in costiveness. Let those that are costive rise early in the morning and take a walk or ride, for lying in bed and sauntering about will make a person costive if ever so well, and it is observed that those that are costive when young are so when old. Glisters are to be used in great costiveness; but cathartics are to be avoided if possible.

*Flux of the Belly.* There are three sorts of this flux. First, when the contents of the stomach come away undigested, and is called lientary; second, the chyle is discharged like a jelly or slime, and is called colica; third, the humors are discharged as bile and phlegm together, then it is called a diarrhoea;



yet there is another kind when blood is discharged called dysentery. The lientary flux, &c. are all cured by astringents, and by strengthening the stomach; first give rhubarb or ipicachu-anha, then bitters, but wormwood is the best, and to perfect a cure make a conserve of prickly ash bark and whortle-berries; take of this three or four times a day. This is a superior medicine and will do alone. Rhubarb or ipicach will often carry off the remote cause of the disease, but in a habitual diarrhœ, with gripes or without, the cause often threatens a consumption. This is hard to cure, but must be managed after the same manner, only let the patient observe a milk diet. Both grief and anger produce diarrhœ, as fevers do. The patient should wear a woollen shirt, which greatly helps a diarrhœ.

*A Dysentery* is a violent distemper and differs both in its nature and its cure as it proceeds from different causes. When it prevails in armies it generally proceeds from scurvy; living on salt food, lying cold whereby perspiration is obstructed, often proves mortal. The scorbutic glue affects the juices, and only the smell of the hospitals will set it in motion, and a fever setting in with the scurvy is the executioner of thousands. All that can be done is to give antisco, biticks, and keep the patient as clean as possible, giving *once* in a while rhubarb or ipicach. Yet a dysentery is often contagious and spreads in clean towns, and is known by experience that what will cure it one time of its going about will not at another. It proved exceedingly mortal in London in the year 1670, and there was no kind of medicine which seemed to help it except burnet and brandy, and at another time the same medicine would kill as soon as it was taken; at others a vomit will help, then again that will kill by drawing the venom into the stomach. Rhubarb is a safe physic, but in this disease will do more hurt than good oftentimes, though at others it is the best remedy. It is observed by anatomists that those who have died of this disease have had their intestines gangred. A dysentery happens often in a putred fever, and though the disease should stop, the patient will die of the putrefaction and fever; therefore the phy-

sician must carefully enquire into the primary cause of the disease, whether it proceeds from any other disorder or is from an inflammation or hot cause, and to see if it proceeds from any fault in the blood, or if it is seated in the stomach or bowels. If it is in the blood that must be corrected by attenuants ; if in the stomach, then a vomit must be given of ipicach ; if in the bowels give rhubarb several times, but if the cause proceeds from some other distemper, then the cause of that must be removed ; if the pain and gripes are great give venictrul, and if the patient vomit after the dysentery is advanced for some days, it is a very bad sign. You may use logwood boiled in milk and drank is often good ; also sarison's wound wort root, comfrey root, mallow root, and make a tea, but if too slimy beat it into a conserve and use it plentifully, and often take canker root ; it is useful and was first hinted by the Indians ; also flaxseed pulvcrized and taken in milk ; nettles, yarrow and meadplantain, of which make a tea, or it is better to boil them in whey, and give it, if the blood comes away plentifully, and you will find this to be a most useful medicine. If a dysentery happens without a fever or much griping, then use astringents, such as fungus or bears bate powder mixt with whortle-berries, or the powder of green walnut shells dried. Of this disease the physician should have good judgment, or he will kill two, where he helps one, as they do at present in the putred fevers.

*A Tenesmus* is a continual desire to go to stool ; the part affected is the intesteram rectum, or the spinter muscle. It is occasioned by dysentery, hemorrhoids or small worms called ascarades, or the stone in the bladder. This is best cured by hot baths and you may use venice trule and strengthenings given internally.

*Bilious Cholic* is a most tormenting pain of the intestines, coming by fits, and vomiting soon after comes on ; the body soon becomes costive, and at length the pain that was wandering is fixed in one place, and iliac passion immediately ensues, and except it can be removed it will fetch up the excrement, and then there is no remedy except death. These cholic pains

are distinguished from rephritic by these signs, viz. rephritic tend upward and the cholic wanders about, and upon eating it increases and the other grows less, and the urine in the beginning is thin, at length grows thicker and gravel or stones come away ; but in the other it is thick at first. The cure of this stubborn disease is to let blood from the arm pretty plentifully, then give an anodyne to mitigate the severity of the pain and gentle physic. Then if the patient be able he may ride horseback. The cholic proceeds from various causes, as from the jaundice, the sour humors in the blood, acrimony of the bile, and sometimes ruptures, abscess and ulcers, and often from drinking ardent spirits, and often after bleeding. Give a glister and then it will operate, though not before. The cathartic used in this case should not be pills or dried powder, but one spoonful of hirepiera or castor oil ; or if the pain is abated give wild fluor de luce, or the juice of the root, and on the outside of the belly lay a bag of wormwood or tansy well heat by the fire, or sometimes a warm iron to the navel ; if the constitution be ruby and the pain coming on, ease it with anodyne, and then give a dose of jalap in fine powder mixed with molasses ; a heaped tea spoonful to an adult, which will operate both up and down, then give bitters, and these will give the cure. The cholic sometimes degenerates into a palsy, and if it threatens to take that course you must beware of anodynes, for they will hasten the disease, and when they are given plentifully they often throw the disease on the limbs and the person becomes useless.

*Hysteric Cholic.* This is attended with vomiting, the same as the bilious cholic ; but the treatment is manifestly different as it will not do to use bleeding, cathartics or gilsters, but give castor, laudanum and asafœtida, and if the patient is costive you may give herapiera for gentle physic and burdock leaves or galbanum applied to the naval.

*Of the cholic pictonum or dry belly ach.* This is a kind of cholic and is called nervous. It is frequent in the Carabee Islands and is the most tormenting of all pain except the stone.

It draws all the bowels into contact, and in the mean time the body is very costive, the urine comes in small quantities. It often degenerates into palsy or the total loss of the use of the limbs. It is cured with liquid purges and glisters, but you must not use anodynes, for they cause the palsy. If frequent purgings are not continued then proceed to strong purges until the pain is quite remitted ; Barbadoes tar may be used for a long time, two drachms at a dose is accounted a specific in this disease ; as to the cholic in general soft mucilaginous substances are to be used, such as bals. peru or white pine bark boiled to drink, and oil amig. dule, oil lin, and in glisters use salgem.

*The Iliac Passion* is a tormenting pain with vomiting ; nothing will pass downwards until the very excrementa are brought up. The intestines seem to be wisted, or one part enters the cavity of that part above or below, and it often appears to the patient that a gnawing is felt. This is sometimes by itself, and often mixed with other diseases or with other cholics ; but it often kills the patient. Bleeding is absolutely necessary in the beginning, as also warm bathing, then give an anodyne and gentle glisters and not cathartics, for they are immediately vomited up. After glisters give sal. absinthi and oil of cinnamon and spearmint internally. The smoke of tobacco blown up as a glister is good to ease the pain, and the cure must be carried on with balsams, &c.

*Of Worms.* There are three sorts, viz. the teres or broad, the tanca or tape worm, and the ascarades ; yet there has been many more found in different parts of the body in a morbid state, but not to be mentioned. The teres are the most common and are like earth or angle worms, only rather whiter. The tape worms are like a narrow ribbon and are several yards long, and it is often said there is but one of these in the body at a time. The person that is troubled with this worm is very greedy and scarcely can be satisfied with food, and after he has eaten very plentifully, he will feel faint at the stomach. The ascarades are small worms like thread, and if they are brought



away they quickly breed again. These worms for the most part lie near the rutum. All worm disorders are best cured by mercury, therefore use mercurus dulcies with sulphur, or you may give ethiops mineral or the powder of tin ; but for the ascarades give aloes, myrrh and wormwood simmered and dissolved in water, then strain it and make a glister of a part of it, and the remainder mix with rum and molasses ; give this three mornings in a glister and it will carry off both worms and nits. If the case is not bad he may only take the medicine internally. Abundance of things are used for worms ; if we mix a number in composition they will very effectually and seldom fail. Take worm seed pounded, common wormwood, black alder bark, tansy seed, featherfue, elecampane root, horehound, black cherry tree bark and ground ivy, boil them all together in water from two quarts to half a pint, then add half a pint of rum and half pint of molasses, give it at the change of the moon three mornings and it will effect a cure. It is evident that worms cause straining motions of the body, as convulsions, epilepsies, apoplexies, vertigoes, headach, cholic, numbness, itching of the nose, hiccups, starting and frights in the sleep, sleeping with the eyes open, a quick pulse, cough and asthma, and therefore when we see these signs we are to consider whether worms are not the cause and direct accordingly.

*Of a Diubetes.* This distemper comes on privately at first, is only a little dryness in the mouth ; after some months a thirst comes on and the patient perceives he makes more urine than usual, at length a weakness in the back is observed and the thirst increases. The strength and body seem to waste away, and often a kind of hectic fever attends, but no night sweats appear ; but at length the urine runs away in great quantities as clear as pure water ; soon there is the appearance of oily matter on the top of the urine if it stands some time. If the urine stops they swell, and when the disease comes to this death is not far off. Patients are often subject to cramps ; they are observed not to live more than four years, if it proceeds ever so slow. It is a mortal disease, and often hereditary, but when

it happens from other disorders, I have seen several cured. And it was done in this way, viz. let the patient live on milk, especially on butter milk, take bears bate, prickly ash bark, and crain's bill root, dry and powder them, and mix in conserve of red roses and take this often. Take rosin, loaf sugar and alum each one third, mix and take them as much as will lie on the point of a pen knife twice a day. Acorns pounded or powdered cinnamon, cloves and nutmegs powdered and mixed is useful. If the physician is called in time let him give a vomit in the first place.

*Nephritic* pains proceed from an inflammation of the kidneys. The sign is a numbness in the leg of the same side, and pain in the groin and testes. It is often occasioned by a stone in the kidneys. The cure is the same as in other inflammations, such as bleeding, gentle purges, and cool diuretics, as nitre, cream of tartar, mullein, mallows, spotted arsmart and elder root, flowers or berries. If it cannot be cured, an abscess will be formed after seven or eight days, and putrefaction comes on about the kidneys and pus gathers. Sometimes sand, gravel or stones are generated into the kidneys or bladder by the inflammation.

*Of an inflammation and ulceration of the bladder and kidneys.* The signs are a heat of urine, a strangury, a fever, a numbness of the legs, vomiting bile, a costiveness, and is distinguished from the stone by a continual fever, which is not in the stone, and it has a dull throbbing pain almost continually; that of the stone comes by fits. In the beginning the urine is red and afterward is watery and pale; but in this it is the reverse. The cure is the same as in other inflammations; then give balsam of fir to destroy the ulcers and syrup of poppies to mitigate the pain; to abate the heat give mercurious dulcies.

*Of an Ulcer of the kidneys and bladder.* The signs are a great pain in the groin and about the pubes as often as the person makes water. If the fault be in the penis itself, the pain is felt in passing urine; but in ulcers it is not felt except the ulcer is at the neck of the penis. Those ulcers of the bladder and kidneys are seldom cured in young people, and never in

old ones. Gentle purges with turpentine and balsam ought to be given, and a milk diet used.

*Of the Stone in the kidneys and bladder:* The signs are a pain in the region of the loins, with a heavy weight in the substance of the kidneys, with a kind of numbness in the part. But when the stone passes out of the pelvis of the kidney into the urethra, a most tormenting pain follows with burning heat of the loins and numbness of the leg on that side. The urine is either bloody, thin or watery, and but little in quantity ; but after the stone passes into the bladder, the urine becomes thick and black and in great quantities. If it is in the bladder the patient has a continual desire to pass urine, which is followed by a violent pain at the end of the penis, and a continual desire to go to stool with an aching of the penis. Medicines for a stranguery do no good. A prolapsus ani or a falling down of the anus often happens, and there is found fungus excrescences in the bladder, imitating a stone, but not often. Both ancient and modern physicians acknowledge that there is no medicine yet found that will dissolve the stone in the bladder, but it must be extracted by operation of surgery ; yet an abundance of medicines are proposed as oil amig. dul. oil lin and mucilage. Smothering medicines seem to be the best calculated for this purpose. It is observed that wine drinkers are often troubled with the stone, but cider drinkers are not ; one dissolves saline particles and the other evagulates them into tartar, which lodging on the glands often breed the stone or gravel. Salt of nitre dissolves tartar and will dissolve the stone when put upon it, but whether it can carry its power to dissolve the stone, being taken by the mouth, has not been sufficiently tried to warrant the trial, but this might be tried by those who are fond of speculating, viz. dissolve nitre in cider and let the patient drink plentifully of it for some time, or you may take of salt petre one ounce, sow bugs two spoonfuls and beat them all into a conserve with maple sugar, and let the patient take of this as much as will lie on the point of a penknife three times a day or

more, or you may take casteel soap, salt petre and sow bugs, and mix as before with balsam of fir, &c.

*Of an Ischuria or total suppression of urine.* This is sometimes a fault in the blood and often an obstruction of the kidneys when no urine comes into the bladder, and sometimes it is obstructed in the bladder and must be drawn away by a cathartic ; if in the bladder, it may be obstructed by a stone or some particles of gravel ; but if no water comes into the bladder and the salt of the urine be in the kidneys or the palsy, then there will be a heaviness at the heart, great sweats, numbness of the senses and vomiting. This disease is almost always mortal, yet some live to the tenth or eleventh day and some longer. When it is in the blood only, without a palsy of the kidneys, you may take the juice of horse-radish and lemons together, but the last remedy is this, viz. take twenty honey bees, forty sow bugs, and ten Spanish flies, bruise them all together, then tie them in a thick rag or piece of cloth, put them into an earthen cup, then pour on them a half pint of cider boiling hot, let it stand half an hour, take out the rag with its contents, gently draining it to the cider, add half a pint of syrup, mallows, garlic, cackle weed, mullen and spotted arsmart ; of this give a spoonful every hour. If the disease be wholly in the blood, and the person can bear bleeding, it may be performed, and spt. vit. or nitre given. Old people are mostly affected with this disease or disorder, and it is most generally fatal.

*A Strangury* is passing the urine by drops with heat and a sharp pain. This disorder often happens, and if extreme, a vomit is to be given first, then cooling glisters of mallows, elder and mullen boiled in milk. But I usually give salt petre and sow bugs, as in the above disease, and sometimes spt. of nitre of fifteen drops at a dose, a tea of mullen, spotted arsmart, elder roots and mallows ; let the tea be taken plentifully.

*Dissuria* is a passing of urine with great straitening, pain and a sense of heat, occasioned by the mucus of the passages being worn away by the sharpness of the urine or some ulcer in the neck of the bladder ; a thick matter is discharged by urine.



In this case oil of sweet almonds is useful with bals. of hackmetack, and for a tea use white pine bark, mallows, comfrey, solomon seal, &c.

*Of incontinency of Urine.* Children and old people are subject to this incontinency, which they are not able to avoid ; but nature often helps children as they come to years of manhood ; but it is incurable in old people. When a person is incontinent in a fever, it is a sign of death ; it is liable to women in the last months of pregnancy, and there is no other remedy but delivery. For the cure, use the flesh of mice or mouse flesh dried and pulverized and then taken in wine.

*Of bloody Urine.* This often happens by falls and bruises, too much venery, &c. The urine is altered according to the quantity of blood mixed with it, and may proceed from a suppression of the piles, which is not dangerous. The patient is to be bled, if the blood comes away in great quantities ; but the best remedy is to use a milk diet and soften the acrimony of the urine ; take comfrey and milk and boil them and drink it ; also yarrow, nettles and johnswort in a tea—sheeps, goats and mares milk is commended by many, and may be a useful diet ; but all things useful to stop blood are useful here.

*Inspection of Urine.* This is compounded of water, salt and earth, and its color and sediments are altered by what is taken into the body, by heat or cold, therefore the prognostic must be uncertain. There is no absolute unerring rule to be taken from appearance of urine. Thin watery urine without any settling happens in the hysteric, hypochondria, chlorocia, cachexy, dropsy and a diabetes. This kind of urine in fevers is a bad sign. If the urine in a fever be first thick then thin, it is a sign that a delirium is coming on ; if a heavy sediment falls to the bottom, a decline of the fever ; if high colored, of pain or high inflammation ; if whitish and sometimes thick, and thin at the bottom, a slow fever ; if a scum on the top like oil, a consumption ; if yellow or blackish, the jaundice. But some patients with an ulcer of the bladder or kidnies will pass all

kinds of urine, therefore no particular sign is to be depended on, but we must compare all the symptoms together, as the urine, pulse, and countenance of the patient, with the best enquiry into the case of the disease, the time it begun, the manner of its operation, the way of the patient's living, whether it is high or low, his age, whether he drink much spirits, his constitution, whether sanguine or phlegmatic, and whether there are not some other distempers connected with that which is most complained of, and the physician that does not consider all these things before he gives his judgment, but pretends to prophesy over a glass of urine is a finished quack, and those who believe him are fools.

*Observations on the Pulse.* This is likewise uncertain, but yet to be observed. In a healthy person it beats about eighty times in a minute, and in a fever it beats according to the motion of the blood through the heart and arteries. If it is high and hard, we are to expect an inflammation, a burning or pleuritic fever ; if it be slow and creaping, the blood is often too low, and a slow fever will follow ; but in the jaundice there is often a slow and interrupted pulse. If the pulse in a fever remit, we may suppose death to be approaching. In the scurvy and jaundice it is a sign of costiveness, and they may live some time, yea, months with such a pulse, though not entirely well. In a nervous distemper it varies according to the convulsions of the nervous system. In apoplexy it is very high and strong; in palsies often weak, especially on the numb side. In nervous fevers very unsteady, some quick and others slow, and any pain of the body will quicken the pulse even the tooth ache, and therefore the pulse alone is very uncertain, as much so as the urine, and no more to be trusted.

*Of obesity or corpulency.* This is hard to cure ; low living and much fatigue are the most sure to effect a cure, which fat people do not love to do. Use a drink of partridge bush tea, which will dry up corpulency.

*Cachexy* is an evil habit of the body. It is occasioned by intemperance in drink or diet, or after some long sickness.

The person afflicted with this disorder is generally pale or yellow, and sometimes perhaps of some other colour ; often bloated, especially the face ; sometimes a slow fever attends. The cure is to be begun with a vomit, and then purging with glauber, cream of tartar, or salt petre, and diaforetic antimony, millipedes and juice of ground ivy, blood-root once a week, and shell-fish, such as oysters, lobsters, clams, &c.

*Leucophlegmatia*, is a kind of dropsy, wherein the flesh of the whole body becomes loose, especially in the legs and hands; a great thirst attends it, and thin white urine in small quantities, costiveness, but sometimes the patient is lax. The cure is performed with cathartics, chalybeates, such as the juice of wild fluor de luce mixed with blood-root, and given often in small quantities, so as not to operate too much ; this medicine is of the first importance ;—afterwards, to prevent a return, you may steep rusty iron in cider some days, take a tea cup full in the morning ; this is the best chalybeate ; but if spices or prickly ash-bark are added, it will be still better for this sort of dropsy, and good diet drinks are to be used.

*A Dropsy* is owing to the poorness of the blood, and is attended with shortness of the breath, a great heat, thirst, and swelling first of the legs then of the abdomen, voiding but little urine. This watery dropsy of the abdomen is called the ascites, and is often incurable ; yet it sometimes admits of a cure. It is to be purged off with diuretics, sometimes gentle cathartics do good, and often hurt. Blood-root may be used to attenuate the blood, then give drink made of mallows, mullen, spotted arsmart, golden rod, white pine bark, spruce and trumpet weed root, boil these with malt, pumpkins, &c. and to a gallon add a pound of honey, and stop it up to ferment like beer or ale, take this for a constant drink ; let the diet be fresh meat stewed with onions and turnips, sliced up with pod pepper as hot as it will relish ; this method of living is the most prevalent in an ascites or dropsy of the belly. Drawing off the water through the skin, whether by tapping, as it is called, or by blisters, does not forward the cure, but continues the disease ;

and to bleed in a dropsy is a most certain death ; for the blood being taken away, the vacuity will be filled up by water ; we must therefore give diuretics, and things to restore the blood to a healthy state, and this is all that can be done in a dropsy of the belly.

*Hydrops vesicales.* This is like an ascites, but the water is contained in little bladders in the abdomen ; they are of different sizes, and are called hydatides. This disease happens to sheep, and is called the rot ; the water or matter contained in these hydatides, is often a kind of jelly, and are hard to be brought away ; yet I have known some to be brought from a woman to whom I gave some physic.

*Of a Dropsy of the pretoreum.* This is a collection of water between the muscles of the pretoreum and abdomen, which being pent a long time, forms an ulcer. This, as well as an ascites, is best helped by giving physic several times of the juice of wild fluor de luce and blood root, then lay a blister, and use astringents and strengtheners for the stomach.

*Of a Tympany.* This is a hard swelling without water. People have been scarcely able to account for this distemper ; but from directions, it appears that the intestines grow to a prodigious size ; therefore we may call it a tumor of the belly. It may have some flatulency as well as moveable particles mixed with it. This growth of parts scarcely ever proves mortal of itself, but degenerates into some other disorder, as an ascites or consumption, which always proves mortal. It is to be noted that this disease will not be helped by cathartics which rather do harm ; issues and blisters are the most to be depended on. This disorder often attacks young women, and they are suspected to be with child, as I have seen several times, and none lived many years. Turpentine and balsam are the best to be used in conjunction with purges.

*Of a hydrocephalus or dropsy of the head.* This affects infants. When it happens outwardly next to the skin it is easily cured, for it comes from a hurt in the delivery, but if it is within the cranium and the membranes of the brain, it will often



grow to a great bulk and is then incurable ; if it is without the water it is to be let out by incision, and care is to be taken that no hurt befalls the temporal muscle, and the humor is to be pressed out and the wound healed.

*Of a dropsy of the breast.* Those who are troubled with this, have a fever and cough, breathe quick, their feet will swell and nails grow crooked. It is cured by emetics, cathartics, diuretics and antiphydoptics.

*Jaundice.* The symptoms are a weariness of the body, shortness of breath, want of strength, slow pulse, yellowish urine, white stools and often an itching of the whole body, dryness of the skin as if burnt, yellowness of the skin, the white of the eyes are yellow and feel as if sand were in them. The distemper sometimes follow the cholic, and then you may give rhubarb and bitters, after that casteel soap with horse radish, or take the white part of the faces of the goose and mix with cider, and take a glass in the morning. But if the jaundice be a primary disease, then take a vomit, and after conserve of rue, horse radish root, ground ivy, and horehound beat up with sugar, and as many sow bugs as you can well obtain ; take this in pieces as big as a walnut night and morning. The more yellow the appearance of the jaundice, the easier will be the cure ; but when the yellow color turns black or green, it is called the black jaundice. Grief and trouble often occasions this disease as do the winter colds. Iron boiled in cider and taken in the morning is very useful. The yellow jaundice is common with pregnant women, and it goes off of itself after delivery ; but the infant is often born with the disorder, and in a few days turns yellow and dies, and the nurses cannot tell what ails it. The black jaundice is a hard disease to cure, and if the patient spit blood, it is said to be altogether incurable. The glands of the liver are obstructed and the gall spent. There is often a stone in the gall. Numerous medicines are used in this disorder ; but milipedes and casteel soap challenge the first place ; a vomit is often good, and after that bitters. Some command

sheeps' faces steeped in cider above all other medicines ; ashes in cider is sometimes useful in strong ruby constitutions.

*Rheumatism* is well known in this cold country, and is but little different from the gout, only the pain is more wandering. There is a rheumatism which comes in the winter called the cold rheum, which tortures the patient by moving from one limb to another. This kind is cured by giving the juice of wild fluor de luce for a cathartic several times, and then take prickly ash bark, sweet flag-root and blood root, all in fine powder, and steep it in either brandy or rum. Take this three times a day and it is a most certain cure or remedy. There is another sort called a hot rheumatism, which inflame the parts and swells the limbs. It continues both summer and winter. This is cured by often bleeding and purging, by a milk diet and by drinking whey ; vomiting is to be several times repeated, for it is a disorder that must be handled very roughly, and if it be brought on by drinking spirituous liquors, it will be incurable unless the patient wholly refrains from it. The cause of this disease is a scorbutic salt, which stringes or astringes the fibres. It differs not much from the wandering or scorbutic gout, and is some akin to a true gout. It often affects the lungs or bowels, brains or stomach, causing delirium, vomiting and cholic, as the gout often does; and it proves dangerous in this disease. Diuretics are to be given, as castel soap, salt petre, milipedes, an infusion of stone; horse-dung is an excellent medicine in great pain. If knobs are likely to come on the joints, the cold bath is the best to prevent it, but the patient must drink cold water when he goes into and comes out of the bath ; then let him go into a hot bed, wear woollen shirts, especially if it be the cold rheumatism, &c.

*Scurvy.* Of this, there are two sorts, the cold and the hot. The cold happens to soldiers and sailors, and those persons who live on unwholesome food and in a cold climate and use but little exercise. It is occasioned by corrupt humor lodging on the glands, and it produces a thousand symptoms which imitate all other diseases or disorders, as pain in the head, stom-

ach and bowels, a bloody flux or a scorbutic diarrhœ, loss of strength, ulcers, swelling of the legs, looseness of teeth, &c. It often degenerates into an apoplexy, a dropsy, epilepsy or consumption. This cold scurvy destroys more lives in some armies and on board of some ships of war than the sword. In this disease bleeding is of no use and purges do harm. Mercurius dulcis is useful ; canker-root and casteel soap are good, but above all exercise is to be preferred. To prevent the cold scurvy and help it when it is begun, all diuretics must be used, as turnips, cabbages, and many kinds of sauce too numerous to particularize, but which are generally known. Salt meats and spirits cannot be admitted, but cider may be drank. All symptoms happening in the scurvy must be treated as they are in the diseases to which they belong, for no disease occurs that has not some scurvy mixed with it. The hot scurvy is occasioned by surfeiting the blood, over-heating, by hard labor and drinking great quantities of cold water when very warm, by excess in venery ; choleric people are most subject to this disease. People that are furious in their passions, are often affected with it, and it makes them more uneasy and fretful ; they become emaciated and complain of most disorders to be met with incident to man, such as hypochondria and hysteric affections, an chrysophelas, red pimples, pain in the head and stomach. It is best cured or helped by temperance and cooling milk diet, but is never mortal or seldom cured.

*Gout.* This comes by fits without any warning ; it takes the person in the night with a pain in his toe, instep or ancle ; the pain grows worse every hour with a trembling and shivering. It commonly lasts about twenty-four hours, then abates, the part swells and in a few days the other foot is seized, and the patient undergoes the same with this as he did with the other ; thus one fit after another for fourteen days, during which time the urine will be high colored and in small quantity. The person will be likewise costive. This is a regular gout, but such as have had it for several years will be affected all over their bodies ; it will be in their knees, ribs, hands and shoulders, and

the more violent the pain the sooner it will be over ; it often makes knobs on the joints and the pains do not return untill after a sickness is felt at the stomach. Bleeding is most pernicious and sweating does no good ; but if the vitals be threatened and sickness and vomiting come on, let anodynes be given, as laudanum or venice treacle. If there be danger of the joints being affected by knobs, and if it be possible, oblige the patient to use exercise, such as gardening, and riding horse-back. Snake root and prickly ash bark mixed together are superior medicines. Those people that drink much wine and eat roasted meat are most subject to the gout. Hence it appears that the tartar in the wine and the crudities in the meat not digested, falls on the joints and occasions contractions, which causes obstructions, and thus often causes the bone to callous into knobs on the joints, and the disease is incurable. Though the pain may be gone, crudities undigested may prove fatal in many constitutions, but more so in a high luxurious way of living ; and if eating and drinking to excess be pleasure to them, the gout will cause them to dance to the second part of the same tune. Temperance is the grand preservative of health. Anodynes must be avoided in the height of the fit. Coffee, tea, and chocolate are to be more depended on than all medicines whatever, to which I should have added, sufficient exercise, as gardening, riding horse back, &c. and we must be sure to make the patient perform these several exercises, or we had better not attempt to cure him of his malady. The hip gout is helped by drawing blisters just below the hip with crawfoot and mustard seed, and take prickly ash bark internally at the same time. When this comes by a strain or blow, the part must be anointed with oil of turpentine, neats foot oil and rum simmered together, and give the bark as before.

*Lues Venery* or *French Pox*. This disease was not known in Europe until 1493. The Spaniards carried it from America and gave it to the French, who called it the Spanish gout ; then they communicated it to the English, who called it the French pox. It operates differently on different people. Sook



after it is taken a running heat arises about the private parts, or a heat of urine, and in a few days a gonorrhea or gleet is formed, the matter is carried to the groin and buboes appear. Sometimes callous ulcers happen in the scrotum or perincum, and in some people the testicles swell, and if blood be taken away, blueish spots will appear on the top. At length pimples and spots break out on the face, some yellowish and others of various colours, which heal of themselves and then break out again. These pustules are round and have a dry crust on them. An erosion of the penis often, and a strangury with violent pains, which are worse at night, then comes on ulcers of the palate and throat with hoarseness, together with scabs, deafness and blindness. This disease is often concealed under the name of canker, scurvy or gout, it being first taken in America from the Indians. It originally came from the bite of a rattle-snake, and it has been proved by the following, viz. the poison of this snake being infused by a bite into the leg or foot of a man and allowed to progress for some time, will greatly affect the animal spirits ; it will raise and excite venery ; then if this man copulates with a woman when so affected, he will seem to be somewhat eased for a short time, but will communicate it to the woman, which will operate slowly, and she may communicate it to others; so that we find it to be an animal poison, and is best cured by salivation. When it is allowed to progress for a long time it cannot be cured any other way ; in the beginning it is easy cured. If any person thinks he is possessed of this disease, let him take four spoonfuls of white pine turpentine ; blood root in fine powder one spoonful, salt petre half an ounce, sow bugs or milipedes two hundred mixed and beat altogether ; then every night on going to bed take as much as the bigness of a walnut and it will totally prevent the progress of the disease and perform the cure. For a drink to sweeten the blood after a salivation, you may make a tea of sarsaparilla root, sassafras root and fever bush ; drink this several times a day. If the case is desperate, a salivation must take place. At first anoint the skin, legs and arms three nights with mercurial ointment, then

give a vomit of turbeth mineral in conserve of roses ; a spitting will follow, then be careful that the patient use no cold drink, and he must live on thin water gruel. If the salivation is likely to go off of itself before it has performed its proper office, you may give five or six grains of merc. dul. or calomile in conserve of roses, and two or three grains may be mixed with diaphoretic antimony in all salivations. . When you wish to lower the salivation use sulphur once or twice a day, and give rhubarb for physic, then sweeten the blood as before directed. Some people cannot easily bear a salivation, and in others it is not easily raised. In this case it will not do to strain nature beyond what she is able to bear, nor force the other against the nature of the constitution, therefore it may be cured by taking a longer time. Give every day calomel fifteen grains mixed with a tea spoonful of flower of sulphur, and if you find that it works downward too much, that is, more than two or three times, you may give less, then give one dose of rhubarb ; continue this practice for two weeks, [then give calomel once a week and the rhubarb once in two weeks, and all the time let the drink be white pine bark tea, and the root as before mentioned. All the symptoms in this disease that imitate others are to be treated as the disorders of those symptoms.

*Of a tinea capitis, or as we say, a scalt head.* It is at first a dry scurf, at length it becomes like a honey comb and runs and itches and is often catching. You may give milipedes, but it is scarcely possible to effect a cure until the hair is all plucked up by the roots, and it may be performed in this manner, viz. a cap being made and spread with tar, applied to the head and worn some time, often pulled off draws out the hair, which is corrupted at the roots ; then wash the head with allum water, and when you have picked and pulled out all the hair, make an ointment of mutton tallow with a little tar, and it will soon be well, and the hair grows out again.

*Of an inflammation of the eyes.* There are many names for the diseases of the eyes used by ancient authors, which tend more to perplex the enquiring student than to give him real

knowledge, therefore I shall not mention them, moreover they are all treated in nearly the same way ; however a few of the two and forty will be taken notice of, somewhat separately. Inflammation of the eyes are to be cured by physic and bleeding; you may apply to them Roman vitriol dissolved in water ; it cools and scatters. Take the bark and root of baswood, soak it in cold water, and it soon turns to a slime ; wash the eyes with this, it often cures, or take capis calimerarus three drachms powdered and dissolved in half pint rose water and a spoonful of honey, wash with this two or three times a day and take physic at the same time if the case is bad. A cataract is a film covering the eye or a part, and is couched with a needle ; some take it off, but it is a difficult thing to perform without hurting the eye sight, though many authors assert their success in the performance. You may blow the powder of comfrey into the eye, and in a day wash it out with water impregnated with honey and allum ; this will remove recent films, and is worth noticing. A tistula lachrimalis is an ulcer of the lachremal duct and gland, and is to be cured as other ulcers are. A gulta serenna is a fault of the optic nerve ; it comes on gradually and is incurable.

*Hermorrhagia or bleeding at the nose and spitting blood.* This is helped by bleeding in the foot, smoking tobacco or drinking a decoction of yarrow. But if bleeding at the nose happens in a fever it is dangerous ; then give salt petre and let the drink be milk and water, but if no fever, then dip cloths in vinegar and apply them to the neck and let him hold cold things in his hands ; but if it cannot be stopped, apply the last of remedies close to the nose, and it will stop it immediately, viz. a toad ; people may think strange of this, but the toad will cure scio amesse factum. The powder of comfrey is useful to snuff into the nose ; and you may use album greeum or white part of the faces of the dog in powder, it will stop all manner of bleeding. Spirit of vitriol, sugar of lead, with some white lead taken internally, will operate against the hermorrhagia and stop it.

*Loss of smelling.* This is occasioned several ways, and

comes without any manifest cause ; it is generally incurable, especially in old people. The herb marjorum and rosemary with sage, are esteemed useful in this disease ; but if it proceeds from a sordid ulcer, called ozena in the nostril, which is generally of the venereal kind, and often grows cancerous ; in this case a decoction of tobacco for a wash, and tobacco ointment are the best remedy. Sometimes a polypus is bred in the nose, which fills up the nostril and adheres to the upper part of the nose ; it is swelled larger sometimes than others, and is of a blueish color. All that can be seen must be extracted with an instrument made for the purpose. If it be painful it is best not to meddle with it, for it then begins to be cancerous. It is sometimes soft and slippery, of a white or redish color ; the excrescence grows in the lower part, and then it is called a sarcoma, and must be destroyed by caustics on the decrease of the moon, for then the tumor is less ; use tobacco ointment, which will cleanse and heal the sore.

*Distempers of the Tongue.* If the taste be lost, and do not return of itself, you may chew horse radish root every day ; if the speech be lost from a palsy of the tongue, use mustard seed, prickly ash berries, pepper and dragon root chewed in the mouth, and use sage tea for a common drink.

*Disorders of the teeth and gums.* For black teeth, rub them every day with the ashes of tobacco, which is as good a dentifrice as the most costly in the shops. To preserve the gums and keep the teeth fast in their sockets, you may use alum dissolved in rose water. The most common practice is to chew a small piece of tobacco every day ; but I think this has led to the use of the small piece many times more than is really necessary for that purpose. For the cure of the tooth ache, we generally have recourse to the German key, or some other instrument of equal celebrity, for the purpose of extraction. It is affirmed, that the root of iris lutea chewed, will surely ease the pain. The juice of wild fluor de luce will do the same ; but if the tooth inclines to cause an ulcer, it is most advisable to have it drawn out, for it may perhaps affect the jaw.



*Distempers of the Ears.* An inflammation of the ear is attended with great pain and throbbing. It often arises to such a height as to cause convulsions and delirium. The smoke of tobacco blown into the ear sometimes eases the pain ; earth or angle worms stewed in neats foot oil and a few drops put into the ear, is often of essential use. If it proceeds from an ague, then an onion roasted and applied to the ear will give great relief. Sometimes it is occasioned by worms in the ear ; then the juice of worm seed is to be used, or six drops of neats foot oil, and two drops of oil of turpentine mixed, heat it and drop it in the ear and it will kill the worms. A noise in the ear is seldom cured, for if helped, it will soon return ; the spt. salamoniac and spt. of castor, a few drops put on cotton and worn in the ear is the best remedy.

*Deafness.* If it proceeds from wax being in the ear, it must be syringed and thoroughly cleansed ; but if it arises from any internal cause, it is incurable ; but if any thing will cure it the following must be the medicine, for there is no other found out, viz. take ants or pismires eggs and onions, bruise them together and drop the juice into the ear. A simple medicine, but it has done wonders.

*Of the relaxation or falling down of the uvula,* as it is vulgarly called. This happens to be relaxed so as to fall down or hang so as to touch the upper part of the æsophagus, and cause nausea. Warm astringents are as good here as in catarrh ; sometimes it proceeds from a tumor which gathers very quick, and often chokes or suffocates the patient ; it breaks and discharges a watery serum, and is often to be opened by incision. Before it has proceeded too far, it is best to give a vomit. I have frequently known this to give immediate relief ; it must be given several times, and warm things must be applied to the throat externally ; and for gurgles, use camphor and hot spices, mixed with spirits, &c.

*Aphthae* or *Thrush*, is a disorder which affects the mouths of infants. The nurses call it a sore mouth, yet it is in their stomach, throat, bowels, and finally through the whole body. It

appears white and yellow at first, and at length it turns black, and is then accounted dangerous. It often happens in fevers to adults, after the crisis of the fever is not dangerous. Spirit of vitriol is used by some, though it takes it off the mouth, yet it thickens the blood and does mischief; peruvian bark is used by others, and is often of considerable consequence; but sal. prunel, sow bugs and turpentine is the best to carry it off, and make a tea of devil's bit cureall and crain's bill root and meadow plantain, let this be given in small quantities without sweetening, and once or twice a day give a tea of wild liquoric, or any other that is at hand, with honey, if no purging come on.

*Of a Gutta Rosica.* This is a redness of the face about the nose and cheeks, with round red pimples, so that the nose grows to a great bulk, and looks as if the blood would come through the skin. This happens chiefly to those who follow drinking spirituous liquors, and is incurable in such people, unless the love of it be banished; hence however a cooling diet is to be used, and the face anointed with an ointment made of tobacco, jalap root, house lick and elder.

*Cutaneous disorders.* If blackness of the skin be natural, it is incurable; but when it is only burnt by the sun, it may be washed with the juice of lemons or camphorated spirit of wine; take an ounce of the juice of jalap, and a pint of water, mix and add a small piece of salt petre, wash the face and hands two or three times, and it will free the skin of the tan, though the sun will bring it on again if the patient is much exposed. Lenting is yellowish spots on the skin of the face, which are very small; these are cured the same way as the taking off of tan. The epbelides are broad brown spots in the forehead and on the breast; they chiefly affect women with child, and which they call moth. The maucla hepatica or liver spots, are of a yellowish colour, and sometimes are as broad as the palm of the hand. They are chiefly on the neck and breast, and are attended with a remarkable itching. They are cured as the tan, or you may wash with camphor and rum. The sudemina, pimples and spots thrown out on the skin by sweat, occasioned by

sharp scum in the blood. Essena is what is commonly called the nettles spring. It comes on as if the person had been stung or whipped with nettles, and is occasioned by a sharp scum in the blood, and is much like a chrysephelas, but does not continue. It is to be purged away with cooling physic, such as sal prunel or salt petre. Phlyetana are small blisters arising between the fingers and about the wrists, and are to be cured by washing in solution of salt petre, with water and alum. Syrones are pustles in the palms of the hands and feet, and are occasioned by worms of that name, and are cured by mercurial ointment. Veru are hard tumors at the bottom, and rise to white heads; they most commonly appear on the neck and face, and are most common to young people; they are as large as hemp seed, and are generally difficult to cure. Spirit of camphor and tobacco ointment mixed with honey is useful.

*Herpes*, are those single red pimples which rise upon the face with white or yellow heads and discharge a drop, then dry up again of their own accord. There is another sort called the herperseripigo, but we call it a ring worm; these are easily cured, but generally return again at the same season of the year, and sometimes increase in number, spreading about; they are hard to cure. *Ethiops minerale* is to be given inwardly, and for an ointment take half a pound of hogs lard, blood root in powder, one spoonful, half an ounce of salt petre, brimstone two ounces, tar one gill, mix all together by grinding in a mortar, anoint the ring worm twice or three times a day; or take the outside or the rind of bacon which has been salt petred, beat this with green scurvy grass to salve, and anoint as before. There is a third sort called *herpesmiliras* or the shingles. It breaks out in white blisters on the side, thighs or legs, and looks like a burn, and is attended with great pain. To cure this, use blood root boiled in water for a wash, or some steeped in rum to be taken inwardly, or you may put on the warm blood of a black cat, which will destroy the tumor; but the *herpes exedens* is the worst of all. This itches, swells and ulcerates the parts. It imitates both the shingles and chryso-

phelus, and sometimes the struma and canker. It arises from a hot caustic bile, and penetrates the cuticle of the surface of the body, and corrodes over the whole surface of the body as if burnt. I have known three women to have this disease to a great degree. In endeavoring to cure this stubborn disease, we must concert the hot bile in the blood with elder roots, mullein, mallows, and sarison's wound wort, made into a tea for constant drink ; and for diet, use the antiphlogistic regimen ; drink milk and butter milk and water ; make an ointment of house-lick, mullein, the bark of elder, meadow plantain, neats foot oil and bees-wax ; anoint the parts affected three times a day, and keep on a plaster of diachalon simplex, and if the person is costive, give a potion of physic once a week, till the disorder abates.

*Erysiphelelas, or St. Anthonies fire.* Any part of the body is subject to it, but mostly the face and breast. The part affected swells a little, with great pain and redness at first. There are two sorts, the one before described, and another happens by the blood being burnt with strong liquids. A small fever attends both sorts. Physicians differ greatly about the cure ; some order cathartics and bleeding, and some condemn it ; however, it is certain that physic and bleeding have been death to many, and is not safe to practice. Camphor dissolved in rum may be applied to the part ; but from experience, notwithstanding what all writers have said upon it, I usually take two ounces of salt petre and dissolve it in a pint of water, take some of this two or three times a day, and wash with the same. This has proved a specific, and we need no other medicine, for this is safe and sure.

*Itch* is commonly known and felt ; it is of two sorts, one called the mist itch, with pimples between the fingers and finally all over the body, and are filled with a thin watery scum. The other runs into a scab, and is called the Irish itch. The first is the easiest to cure, and is performed in this manner, viz. make a tea of sassaparilla root, sassafras and fever bush, and drink plentifully ; then make an ointment of elecampane root,



meadow dock root, white helebore root and tobacco leaf, boil these in a quart of water to half a pint, strain and add one pound of hog's lard, one ounce of flower of sulphur, half pint of tar, simmer them altogether to an ointment, and use this all over the body, but do not wash it off, put on clean clothes and wear them a week, drinking the tea plentifully every night ; it will cure by once ointing. Another method of making ointment—take half an ounce of quick silver, four ounces of turpentine, and grind them together two hours, then add four ounces of flower of sulphur and one pound of hog's fat, grind them all together for two hours, that they may be perfectly mixed, then anoint by putting it only on the pimples and in the palms of the hands, and it is a certain cure.

*Of an Impetigo.* This has divers names, as lepra grorum; this comes out in clusters of small red pimples in any part of the body ; but mostly on the arms and legs, spreads broader in time, when scratched a thin ichor or scum issues out, then a dry scurf is formed. It is hard to cure, for it is between an itch and a leprosy. Some order a salivation ; but the best method is to take viperine medicines or milipedes made into a conserve with ground ivy and scurvy grass, or use tar ointment if you give physic, and it should be a preparation of antimony, and the ointment of sulphur, tobacco, blood root and neats foot oil, with a little tar, and you will find this to be an extraordinary medicine in so stubborn a disease.

*Leprosy* is the highest degree of itch and scurvy together, and is not very often in our country ; it first appears on the elbows, hands and feet ; the skin grows rough, feels dry and scurvy, often becomes wrinkled and turns to a dry scab. If blood be taken, it appears blackish ; this disorder is generally incurable, though in our cold climate some live many years. It is the leprosy of the Greeks, and I have known several to have it in this country, occasioned by an itch and chrysophelas, not being attended to in season, and a salivation will not cure it ; but viperine medicines must be used. The patient should often bathe in salt water, and for a common wash, the bark of

basswood near the root steeped in water, and the patient may take inwardly antimony and sulphur mixed with honey.

*Of an Elephantiasis.* This is the leprosy of the Arabians, and is called by this name because the skin so affected resembles the skin of the elephant. It consists of little knots or tumors in the flesh, which are moveable under the skin, are without pain in the legs, arms, face, mouth, palate and about the root of the tongue. It deforms the part and swells it to a great degree. It is sometimes on the feet and toes, they will swell and callous. It is accounted altogether incurable, and happens mostly in hot climates or countries, but some old drinkers of spirituous liquors have been affected with it in our country. The medicines proper to be used are the same as those for the leprosy, viz. viperine and antimonial medicines.

*Of burning and scalding.* This accident often happens. There are three degrees of a burn, the first is when the skin is burnt red and blisters arise. To take out the fire and prevent the blistering, dip the part affected into warm water, as warm as the patient can bear it, or hold the part against the fire, and at the same time putting on neats foot oil, onions and salt and soap beat up together. In the second degree the blisters arise directly and the part grows red, is exceedingly painful; in this case oily medicines must be used as poultices of Indian meal and hog's fat or Indian hemp root boiled in milk applied and changed often, or take the root of sarison's wound wort soaked in water, which will turn to a slime, and put it on often. If the burn be on the face it must be covered with a thin cloth and kept continually wet on the outside, so that the burn may be kept moist without taking the covering, to prevent the skin from scathing, which it will do, if it comes to the air; but if the eyelid be blistered it must be punctured, and the water allowed to run out as must all other blisters. Take the powder of comfrey root and put it on the eyelids which will stick, and when you wash it off put on more, otherwise the putred flesh will corrode the thin skin of the eye, as several whom I have seen could never shut their eyes afterwards. Bassilicon is the best

ointment of the shops for a burn ; but we may make ointments far superior of our own roots and oils, as mallows, comfrey, elder bark with neats foot oil and honey, and beeswax. The third degree is when the skin turns black immediately. This is very dangerous, because it may cause a gangrene, which often happens, the part is numb and must be cut to the quick the first or second day. In all burns the particles of heat penetrate into the blood and occasion a fever in a short time ; therefore camphor should be given inwardly as an attenuant and the drink cooling. A plaster of diacalon simplex must be placed above the burn to prevent the spreading of the humors ; but to stop putrefaction, use brandy with a thin cloth, and dip it in as often as it appears dry. Linseed oil is of itself very useful. If a limb be burnt it must be kept straight during the cure, or the tendons will relax and the limb remain crooked.

*Of Inflammations.* These are tumors with redness, pain, &c. and must be either scattered or brought to suppuration. To scatter an inflammation a part must be performed by cold repellents, for they may occasion a worse disorder ; but it must be done by camphor and spirit applied outwardly. Blood root and camphor inwardly will so far thin the juices and divide the tumor as to carry it into the circulation ; or if the part begins to putrefy it must be poulticed and brought to suppuration. The best poultice is milk-weed root boiled in milk ; some use yellow lily root, and after the ulcer has broke or been lanced, then draw out and deterge it with turpentine, balsam, or any of the kind ; but if the inflammation be in the breast of women as it often happens, by the stagnation of milk or some other cause, as a chrysephelas, then you are to be very cautious, for the breast will not bear hot medicines. If it can be scattered, you must use things moderately cooling, as oil of lin, with marsh-mallows, &c. mullen, elder and houselick boiled, with this bache it ; it is seldom scattered, and for the most part it is not a safe practice to promote it. It often happens that inflammations of the breast degenerates into abscesses, and sometimes into cancers. If the woman gives suck she must dry up her

milk, for the sore breast will not get well while the other gives milk, and in the mean time use suppuration medicines as much as possible. Make poultices of white bread and milk if it be much inflamed ; but if not, use a mallows poultice, and in great extremity make one of milk-weed boiled in milk, then strain and thicken it with flour and apply it, or make an egg poultice with honey and flour, and this may be kept on after it has broke, as a detergent until it gets well. An inflammation of the testicles often happens by bruises and is attended with violent pain and often convulsions or vomiting. In this case bleeding plentifully is of great use. Dissolve the bruised blood by warm fermentations as the decoction of wormwood, crain's bill and cureall boiled together ; anoint the part with the oil of lin or neats foot oil, and to prevent a gangrene or cancer, bathe with brandy and the tincture of myrrh. A furuncle or bile is not dangerous, they are drawn to suppuration with any of the turpentine. They generally denote the strength of the constitution, by throwing off the puant matter ; therefore suppurating medicines are most convenient and the physician is not usually wanted. An inflammation of the gums is attended with pain and redness, and is sometimes cancerous ; to prevent which you may wash the mouth often with a decoction of cureall, devil's bit and gold thread ; use this as a gargle.

*Of a Ranula.* This is a tumor under the tongue, of a whitish color, and must be opened. Sometimes there are stones in the matter, and the matter it discharges is like the white of an egg and is not usually dangerous. Chewing cureall and devil's bit after it has been opened is all that is needful for detarging it.

*Of a Paronchymy, or Paronchia or Whitlow.* This is a tumor under the nails of the fingers, with pain which sometimes passes from one to the other. Of these there are two sorts, one called a whitlow, the other a felon. The whitlow is easily cured by being brought to a suppuration, and it then discharges a white mucus. The felon comes in the joint and is attended with exquisite pain ; if not remedied in season, causes the



loss of the joint, if not the life of the patient. The remedies in both cases is to ease the pain ; take earth worms bruised and apply to the part ; but when they first begin you may kill them by wetting often with oil of vitriol molified with water so as they will not putrefy. When they are advanced, some take soot, salt, honey and the yolk of an egg, and beat them all together and apply it as a poultice ; this causes suppuration and a cure ; but incision must be used if you wish to save the joint, and it must be made to the bone ; then dissect the tumor. This saves the joint though it does not so easily and quickly give ease.

*Chilblains* affect the hands and feet in winter and swell the parts and occasion them to itch violently ; are painful and sometimes ulcerate. They are cured with rattle snake oil or a roasted turnip with oil of turpentine. All things are good that prevent ulceration. Wash the parts often with urine and spirit, then neats foot oil simmered with elder bark.

*Aneurism* is a tumour occasioned by a wounded artery in bleeding, or from some other accident. It is often occasioned by the palpitation of the heart, and is a collection of arterial blood, which rises to a great bulk, and is soft to the touch. If in the arm or leg, where it cannot be approached, it is difficult to cure, however astringents and bandages are to be used. When the blood first begins to issue it may be stopped ; if it is not stopped it will puff-up the part like a bladder.

*Varise or varicose*, is a tumour occasioned by a relaxation of the coats of the veins. It is often a companion of women in the last months of pregnancy, and is no disadvantage to them ; however it may be taken away by bandages and astringents externally applied to the parts.

*Hemorrhoides or piles*. These are tumours of the hemorrhoidal veins, and there are two sorts, viz. the blind and bleeding. The blind only swells ; the bleeding are the most painful, but not so mortal ; they serve to purify the blood and carry off other disorders which might prove mortal. In the piles therefore care should be taken to keep the body lax. A de-

coction of moon-weed is good, and all cooling herbs as mallows, spotted arsmart, mullen, elder root and sarrison's wound wort. If the blood comes off too fast, bleeding will be necessary ; give inwardly syrup of poppies or meadow cups, called mandrakes, and for an ointment roast frogs and baste them with fresh butter, then anoint the pained parts with it ; after the roasting is performed make an ointment of earth worms, house licks and green of elder simmered in fresh butter, then anoint the part ; eat tamarinds, apples, whortleberries and strawberries, for such trash is much better than shop medicines. All salt things are hurtful in the piles and only serve to enrage and will even bring it upon them. Rosemary taken in honey is good.

*Varicose Hemia* is a tumour of the spermatic vessels, and easy enough to be known. The cords of the testicles are like small ropes extended and covered with knots like grapes, with a relaxation of the testicles, with more or less pain. Medicines that are used in the piles are good, and the oil of lin may be taken inwardly and often.

*Of Oedimatiuous Tumours.* These give way to the pressure of the finger and leave the part pited. They are without pain and often happen on the legs ; are caused by phlegm alone when they are simple ; but sometimes are mixed with other tumours, and those most generally come after some other disorder ; they also happen often to pregnant women. Bitters and strengtheners are to be used to warm the stomach, as hira picra, prickly ash bark, white snake root, blood root and trumpet weed root all in powder.

*A Schirrous* is a hard tumour resisting the touch but without pain and immoveable. It grows by degrees in the softer parts of the body, beside the glands. There are two sorts, the one is the true and the other the bastard. Schirrous, the bastard is wholly without pain and looks red ; it often degenerates into a cancer ; however they may be divided into four sorts as they are commonly called wens in this country ; when they appear on the outside of the body, they are hard and soft schir-

rous tumours, of the same color as the rest of the body. There is a red and blueish sort of schirrous or wen ; some call them cancers and pretend to cure them by caustic. I have known some to ulcerate and others to degenerate into a cancer ; some have been taken off with a knife, and others by caustic. Purges of antimony and merc. dul. may be given to correct the humors. The tumour must be taken away or dissolved, for it cannot be supplicated of itself.

*Struma or Scrophula*, called the *King's-evil*, is seated in the glands, and usually appears about the neck, throat or lips ; it is a hard tumour which in time suppurates and then gathers again ; it sometimes adheres to the bone, and sometimes is moveable, is hard to cure and often hereditary. Give purges of merc. dul. mixed with sulphur, and a diaphoretic antimony ; or take crude antimony in powder four grains, sulphur one drachm, blood root in powder six grains, mixed together for one dose every morning ; also take milipedes one spoonful, a handful of ground ivy, beat it into a conserve, take it three times a day, the bigness of a walnut at a time. A specific for this disorder is this, viz. two ounces of senna, one pound of crude antimony in powder, half a pound of broom weed root, one pound of great meadow dock root, one pound of polly poddy or spleen wort, a handful of archangel and one handful of ground ivy, then make three gallons of liquor, boil it down to two gallons, then add one pint of molasses and a quantity of yeast to cause a fermentation ; take a teaspoonful every morning, it purges and is an approved medicine. The tumors are not to be opened though long in gathering. If it cannot be purged away it must be allowed to suppurate. The parts may be washed with water mixed with oil of vitriol, and tobacco ointment may be used or one made of jalap. Honey mixed with water and a decoction made of devil's bit, cancer root and crane's bill root ; it is a useful detergent, but if white swellings are in the limbs bathing in cold water will be beneficial.

*Spina Ventosa* is a species of scrophula. It is a protuber-

ance of the bone, which does not occasion any unusual color of the skin. It generally happens to infants and young persons. The bone increases in bulk, and a continual pain is felt. It is incurable in the greater bones ; but in the small ones, it is as fingers &c. The place must be opened to the very bone, through the whole length of the protuberance, and then the spt. of the wine of turpentine, or any other, must be applied to it.

*A Cancer* is a tumour, and differs from all others, and therefore is not complicated with other disorders. It is situated generally in the soft parts of the body, as the lips, breast, throat, &c. They begin with stinging pain, which arises to a small tumour not larger than a pea, then a small puncture is observed not larger than a pin's head ; this looks blackish, or perhaps blucish, gradually grows larger, some very fast, others slow, and in process of time it becomes a large black or lived tubercle, and at length ulcerates. A most violent heat attends it, which help to corrode the solids, with a very great putrefaction and foetid smell. It often happens about the private parts of both sexes. There seems to be two sorts ; one is manifest, which ulcers and increases in bulk, and the ovult, which by its heat, eats and destroys the parts, though these are no more than degrees of the same disease. Hot medicines are not to be used, but the cooling ; yet they are often burnt out with some caustic, nay, some have been burnt out by the actual fire. They are said by some to be incurable, except they are cut out with a knife, which indeed is the surest way of cure ; but however, I have known a cancer kept back many years only by applying white lead to it in powder, and it never gained after it was applied. It is to be observed that a cancer is to be kept from putrefaction as much as possible, for the more the skin is corroded, the worse is the case. All oily substances and ointments increase the heat, and therefore must be avoided. To cure a cancer by medicine, if it can be done, must be by washing it very often with a decoction of crain's bill root, cureall root, devil's bit root, meadow plantain, blueberry bush bark



bare's bait or sweet fungus, elm bark and the bark of the sassafras root, these all boiled to a strong decoction and used internally as a drink and externally as a wash. The air must be kept entirely from it and must not be kept hot. The cooling diet must be constantly used and frequently antimónial purges given, &c.

*Of flatulent tumours.* These puff up the skin without occasioning any discoloring of the skin. Every part of the body is liable to be affected by it, but especially the breast; flatulencies when pressed by the finger leave no impression. They are occasioned by cold humour, and therefore must not be laid open, but discussed. Aromatics are to be taken internally; there is no pain in the part, and the swelling is soft as if puffed up with wind. A strong fermentation of wormwood, biting arsmart and burdoc is to be externally used as a bath.

*Of Incised Tumours.* These tumours are subject to the government of the moon's increase and decrease. The first of these are called ganglion, and is seated on the tendon; it is of the same color as the skin, is without pain or danger; it may be cured by rubbing it with saliva or wearing sheet lead on it. The second is called lupira, and is a round tumour arising on the joints, is very soft and must be cured by hot fermentations. The third sort is melcerus, and has matter contained in small bladders of the consistency of honey. All these tumours are of the same color of the skin of the body, and are not very dangerous, but in length of time they grow and are troublesome; sometimes they degenerate into abscesses, they may be cut open and the matter taken out, which is like the white of an egg, and then they must be cleansed and healed up again, otherwise if any matter be left behind it will grow again.

*A Testudo* is a soft tumour between the skin of the head and the skull, which often putrefies; it is in the form of a mole or tortoise. These tumours about the head are very dangerous to the bone of the skull especially, for by it they are apt to become carious; therefore we must endeavor to cause a suppuration if possible, for it can seldom be discussed and sometimes

to wait for a suppuration will not do, lest the bones become carious, but it must be taken out by the knife and deterged.

*Of a Natta or Nata.* This tumour is large and soft, growing on the back without pain or coloring the skin. The stem where it grows to the body is very small, but the tumour itself is often as large as a squash and will weigh a pound or more. The matter it contains is like fat and cannot be cured, only by incision, which may be done without danger, and the wound may be healed.

*Hernia or ruptures.* These are properly a falling down of the intestines from their natural situation by a wound or relaxation of the poritorem. A rupture in an old person is incurable ; they are either in the groin and scrotum in men, and in the habia, naval and other parts contiguous in women. The cure in the first place, if it cannot be easily put up, the patient must be kept from eating any great quantity, especially spoon victuals, and if this does not answer the intent then a carminative glister must be injected, which will generally answer the purpose, and when it is gone up you may apply a plaster of comfrey and solomon seal boiled together until they are as thick as molasses ; then strain and boil to the consistence of salve, spread it on leather and apply it to the breach or to the place where it appears to be ; then apply a proper bandage or a steel truss, keep it constantly up and it will cure a child without fail. A person that has a rupture must be careful concerning his diet, not to eat too much or drink too much for it will enlarge the breach. He must avoid all spirituous liquors and all flatulent food. The cholic often proves fatal in this disorder. There is a disease of this kind which has very peculiar symptoms or prognostics, viz. violent pain, vomiting, hiccups, and at length a languid pulse, cold sweats, a gangrene, and then comes death. This cannot be reduced, if we give medicines, they must be carminative and warm strengtheners. There is another called a windy rupture, occasioned by flatulencies, &c. and is only an inflammation of the testines, sometimes of one and often of both. There is a sense of pain in the scrotum, but not of

weight. Infants are subject to this kind of ruptures ; these of all others are the easiest to cure ; carminatives must be used, such as annis seed, caraway seed, fennel seed, burdock seed, sarsaparilla root; and there is another called bronchocele or a guttural rupture ; this is a tumour of the throat growing out to a great bulk, without change of color, yet soft and moveable, and without pain. The matter contained in it is of divers sorts, sometimes white and thick like an egg or honey and sometimes a kind of dead flesh. It is generally without danger, but sometimes it degenerates into a cancer ; it is to be cured by making two setons, one on each side, which will draw out the humors ; then apply corrosive medicines to the part. There is another called hydrocele; this is a watery tumour of the testes which makes them look as clear as a bladder of water ; it is cured by diuretics, as salt petre, sow bugs, trumpet weed root, mallows and pumpkin seeds ; warm fermentations are to be applied externally. Another called saroecele or pernia carnosae, is only superfluous flesh, most commonly caused by a bruise or blow on the testes, and it is said to be incurable by medicines, and sometimes degenerates into a cancer, and have been extirpated.

*Prolapsus or proudentia ani* is a falling down of the intestinum rectum at the time of voiding the focus. It will not return of itself, but must be performed by manual operation. It proceeds from divers causes as a long continued diarrhoea or dysentery, an inflammation and hard labor in pregnant women. It should not be allowed to remain down long, for it will dry and be very difficult to reduce. If there be any of the above diseases present, medicines must be given suitable for them—but if from weakness alone, give warm strengtheners internally, and when the rectum is prolapsed, apply outwardly the fine powder of comfrey so as to cover it, and then put it up ; place the patient almost on his head in a perpendicular position if the case be difficult ; then if this fails give him two or three slaps on the buttocks with the palm of the hand, for this will occasion the return to recede. Let the patient when he voids his

focus, stand almost upwright and the rectum will seldom come down. The remedies internally are sarsaparilla, gold thread, cohush root, prickly ash bark, cinnamon, cloves, &c. and all warm aromatics.

*Of Warts and Corns.* These we well know, though not always how to get rid of them; it may be done by wetting them with the milk or juice of the milk weed or that of the ulendine. Corns must be softened before they can be removed, for they are a kind of dead flesh, most generally occasioned by a bruise, therefore apply a piece of fresh beef and shift it often, or you may apply a plaster of chalk and soap; but some burn them out with a caustic, and it is a very painful operation; however a little potash will occasion a corn to look like a burnt coal, and then you may cut it out without pain.

*Contusions.* Parts are said to be contused when they are bruised or injured by a weight or a fall, which causes a stagnation of the fluids; the part turns black or blue and sometimes putrefies. In this case we are to use medicines for dissolving the coagulated blood and promote circulation. This may be done by bathing the part with camphorated spirit; sometimes it is necessary to bleed the patient lest the blood should not circulate so as to wash away the coagulated blood, that it might not settle on the internal parts of the body. A beet cut and applied to the contusion is very useful. Take internally snake root, blood root, diaphoretic antimony and camphor; but in a very bad contusion, take honey boiled in wine or cider, to the consistence of an ointment and apply it as a plaster, and renew it once a day. The leaves of the bitter sweet and flax seed boiled to the consistence of a plaster in hog's fat will perform wonders in bringing down the swelling and affecting a cure.

*Luxations of the bones.* The bones are said to be luxated when their heads are removed from their sockets by a blow, fall or some other accident; and often in the scurvy the fibres and muscles are so relaxed as to allow the bones to fall out of their joints or places, or to stick in the edge of the cavity. The thigh bone is tied to its socket by a very strong ligature, and is



the hardest to be luxated and reduced, and it even seems impossible that it should be luxated, unless the head be fractured; therefore a person that has a luxated hip will be lame until it is reduced. The ancles when luxated are very painful, because in the instep are many tendons, and an inflammation will immediately come on. From the obstruction that is occasioned by the luxation of the backbone or ribs inwardly, great danger is to be apprehended, and these most always prove mortal; but if an inflammation comes on before the bone is set, it must be abated by ointments and then reduce the bone to its natural situation. When you reduce a bone, the limb must be extended, otherwise the head of the bone cannot come into its place, and it is to be noted that all bones must go in the same way they came out. Thus, if a shoulder be luxated downwards, the arm must be extended at the same time, or hand placed under the arm, must lift the upper end of the arm that it may go easily into its place; and so on the contrary, if the head of the bone be either above the socket on either side it must be extended and pressed into its place accordingly. This method is to be practiced in general with all the bones; but the more hardy and ingenious the bone-setter is, the easier he will perform, for it cannot be accurately learnt without a natural genius as in all other arts. When the bone is set it must be bound up with a proper bandage, and for a plaster take an egg, beat it up with oil of turpentine and a little vinegar, or a plaster of comfrey root and solomon seal boiled in strong water; this is a most excellent strengthening plaster. If there be a luxation and an inflammation, you may anoint the limb with camphorated spirit or common brandy, both above and below the joint.

*Of fractures or broken bones.* These are either broken transversely or longitudinally. If it be transversely, and the bone broken near the middle, it is to be extended and the two parts brought together exactly, and a plaster applied with splints above it, and a bandage over the whole to keep the bone in its place. The splints should be three or four in number, and the bandage must not be applied too tight, lest it should stop the

circulation and occasion a gangrene. Longitudinal fractures are difficult to be known and sometimes cause an ulcer in the part. But the worst fracture is this, the bone being splintered by a contusion, care must be taken that all the parts be placed as near their original situation as possible, and then use such medicines as in contusions, and then a plaster and bandage must be applied as in other fractured bones, to strengthen the part and knit and callous the bones together.

*Of Wounds.* These are occasioned by some hand coming against the soft part of the body, which cuts and divides the muscles asunder. At first the blood runs out in great plenty, and then gradually stops of itself, if the wound be not large ; but we generally use medicines to stop the blood, as fine flour, spirit of vitriol or the oil in water, puff balls, powder of comfrey root, bole armoniac, oil of turpentine, dragon's blood, nitre dissolved in water or vinegar. When the blood has stopped in a large wound, there soon comes on a sense of heat, pain, redness in the cavity of the wound, and the lips of it are inflamed, a fever and thirst begin, which continue until the wound begins to suppurate and discharge the thick white pus or matter, which should be in about four days ; if it does well and then fills up at the bottom with new flesh, and so continues until it is full, then skins over of its own accord. This healing is the sole work of nature, and needs no assistance but to keep the wound clean by such things as white pine bark or a decoction of crain's bill root, meadow sweet root, cureall root. These, if it be very foul are useful as a detergent ; tincture of myrrh may be used if it has been long neglected, wash it with soap or nitre, then apply ointments rather than plasters. Ointments for this purpose should be made of penetrating medicines, and not allow it to heal too fast, as this causes fungus or proud flesh to grow, which looks red and sore. It will not skin over until that is destroyed by some corroding medicines, as red precipitate, Roman vitriol or by the lunar caustic, or hell stone. But there is a more easy way of keeping this down, viz. use the dry powder of comfrey root or a little dry lint ; the powder of

burnt wool will perform the same office, then you may heal the wound by the common way. The manner of administering medicines must be varied according to the constitution of the patient. A wound of a choleric person must not be treated with so hot medicines as one of a cold phlegmatic constitution ; so in one that has his blood inflamed by the frequent use of spirituous liquors, or that has an erysipelas or any firey humor in the blood and which will not bear warm ointments or plasters, for they draw these hot humors to the wound, and instead of healing the wound, makes an ulcer. Put on plasters that will retard those humors, such as diachalon simplex, or you may make an ointment of your own plants which in my opinion are to be preferred, viz. of mallows, comfrey and yarrow, with neats foot oil and beeswax ; this is a temperate ointment, and is not heating, will heal fast ; but if you want it a little warmer, add white pine turpentine, &c. Basilicon is the common ointment of the shops for these purposes. By experience I learn that an ointment made of tobacco, hog's fat, white pine turpentine and beeswax simmered slowly together to an ointment which will both cleanse and heal. Ointments or plasters to be applied to the feet, legs or hands, must be warmer and more drawing than those applied nearer to the trunk of the body by reason of the parts being more cold. Ointments for green wounds are made of divers things, as meadow plantain, carpenter's weed, burdock roots, crain's bill root, yellow root or gold thread, &c. It is to be further remarked, that if a small artery be cut asunder, the ends slip back and stop the blood ; but if the artery be only partly cut off, it will bleed continually, and if a large artery be cut, it will be almost impossible to stop it, as a great artery of the thigh, the jugular artery and vein, which being cut causes immediate death ; but sometimes it may be stitched up with a small needle made for the purpose. Puff ball is to be used, and perhaps it will be necessary to bind a ligature round the limb between the wound and the part stitched up. Opium is good, and may be put even into the artery when nothing else will do ; the nerves likewise when cut will

fly back, which causes great pain and numbness below the wound, which sometimes spreads, and causes tumours, delirium, convulsions and stiffness in the limb, and want of motion. The same symptoms occur when the tendons are cut, and they must be brought together and kept so by bandages, then they will calous as bones do by the aid of a strengthening plaster. Wounds of the nerves or tendons are very apt to putrefy, and a puncture is worse than a cut ; thus in bleeding, if the tendinous fascid is wounded, there generally arises a small knob or tumour as large as a nut, which in time becomes painful and often putrefies, and occasions the loss of the limb. In this case dip some lint in brandy or other spirit, and wash it often and rinse it in spirit of turpentine ; cold is apt to make it swell and putrefy. Mortal wounds are of the ureberum, brain, spiral marrow, heart, lungs, liver, spleen, kidneys, pancreas, mesentery, bladder, great arteries and temporal muscles, though many of them are often cured, yet they occasion convulsions.

*Gun-shot wounds* are of all the most difficult. The extraction of the bullet which makes a great contusion, and the passage after extraction should be well syringed every day or twice a day with water, honey or soap and water which will cleanse the passage; tents of lint are condemned by the best surgeons, unless there be a wound in some part where the matter must come out as in the throat or abdomen, and the wound being healed often leaves some behind. Gun-shot wounds are occasioned by such great contusions that oil of myrrh and tincture of myrrh must be injected to cleanse it. A decoction of crain's bill and meadow sweet ; of walnut leaves or white pine bark is a noble medicine ; gum elemi and oil of turpentine or fir balsam mixed are the best for wounds of the head ; balsam of peru is in great account by some ; but the Samaritan balsam is the most used, which is only oil of olives simmered together to the consistence of a balsam ; fresh butter or neats foot oil and wine simmered together is a very good medicine—try it. Sometimes a wound near the joint, as the knee, will cause the whitish



water to issue and occasion the loss of the joint. In this case the greatest exertions must be made to stop it as soon as possible, by filling it up with the powder of comfrey root or some dry astringent. Powdered hog dung boiled in blood and applied to the wound is by some called a specific or certain cure.

*Ulcers* are either simple or complicated, viz. sinuous or fistulous or cancerous. Old ulcers cause a feverish state, which wastes the body, as well as ulcers on the lungs. In the cure of ulcers, medicines must be given internally as well as applied to the sores themselves externally. To sweeten the blood use a decoction of sassafras, sarsaparilla and fever bush ; an issue is to be made on the opposite side both in ulcers of the internal and external parts of the body. Merc. dul. mixt with sulphur, blood root, snake root, and antimony is a very good medicine. Ulcers should be washed every day with a decoction of devil's bit, cancer root, crain's bill root, &c. Camphor dissolved in spirit of nitre is very penetrating, but if mixed with honey is more detergent ; and tobacco ointment may be used as you see fit. If fungus flesh grows up in the ulcers it must be taken away by precipitate, Roman vitriol or the powder of burnt wool. If the lips of the ulcer be calloused, it never will heal until it be taken away by the knife or some caustic. Sometimes in an ulcer the bone is curious and full of holes ; small pieces of bone come out as if fractured ; these ulcers are hard to cure. The bone being unsound, if the sore heals it will break out again, sometimes months and even years after it seems to be entirely well. It is sometimes attended with an ague or cold fit, then called an ague sore, others only a feverish ferment, and then it is called a fever sore. Those persons affected should be careful to avoid cold and not wet their feet. Blood root must be taken once or twice a week. Simple ulcers are seldom to be found, they are most always complicated with some other disorders, as hot or cold humors, too much moisture or dryness, all which require a different treatment ; if hot the disease will eat away the solids, then you must give cooling medicines inwardly and outwardly, milk diet is good, but eat no

salt. If it be cold the ulcer will look white and soft about the edges like white swellings, then give astringent medicines, such as turpentine, fir balsam and basilicon. If the ulcer be moist it will run plentifully and the fungus will grow, then astringents must be used, as powder of comfrey and warm ointments, as basilicon, fir balsam, tobacco ointment with turpentine ; and if it be dry and does not discharge, then apply moistening medicines, as honey mixed with blood root, or an ointment made of jalap root or berries simmered with hog's lard and honey ; this is a sovereign detergent and will penetrate to the bottom ; but if you boil walnut leaves in water and mix a little honey with it, wet cloths and apply to the ulcer, it is best of all.

*A Tistula* is a sinuous ulcer occasioned by the piles, is very painful and hard to cure. These tistulas are bred gradually between the coats of the intestine rectum, have a small hole, at which issues out a thin matter without pain near the anus, and in time the parts will itch and become callous. Sometimes it is best not to have them cured, for they discharge the superfluous qualities of the blood like an issue ; but if they are to be cured they must first be cut open, by passing a hollow instrument into the anus up the intestinum rectum, and another instrument in the channel to divide the callous of the fistula, then it is to be cured as other callous ulcers, some by the help of broad needles draw in horse hair and tie the ends tighter every day, until the callous of the fistule is cut quite through, then cure as before directed.

*Of Gangrene or the beginning of mortification.* A gangrene and a sphaulus differ only in degree ; a sphaulus is a perfect mortification, which occasions a total loss of life in the part, and a loss of life in the part is a sign of mortification in fresh wounds and is known by the easing of the pain, the wound turning blueish and black or with yellow spots appearing. A thin yellow water will issue out of the wound, and a bad smell is perceived, and if this is not immediately stopped, death will be the next guest, for it will continue to spread ; therefore we must make deep scarifications even to the quick. Camphor,

snake root and blood root may be given internally and externally ; camphor dissolved in spirit and horse-dung boiled in urine for a bath. Oil of turpentine mixed with aloes should be used, it is not to be kept too hot with bandages, but must be dressed often, especially in warm weather. Spirit of wine or some other, with penetrating ointments that will not be too inflaming are to be used in colder weather. Tinct. of myrrh is very good, and tobacco ointment simmered in oil will be found very useful. There is another kind which comes on gradually, not being occasioned by a wound, is often on the toes or feet, whereby they rot away by inches. This sort is hard to cure, and in process of time becomes mortal. It generally proceeds from some internal cause, as the scurvy, and to prevent this let the patient live temperately, drink no strong liquors, but wash the part with a decoction of blueberry or chokberry bark with walnut leaves, devil's bit, crain's bill root, and cancer root boiled together in water, keep the part constantly wet, and inwardly he may take cost. peru twice a day, half a drachm for a dose, or for want of this bear's bate, a tea spoonful twice a day in a tea of camomile, crain's bill, &c. But there is a mortification so occult and hidden, that it is not generally taken notice of as it ought to be. This is occasioned by the heat of the fever which brings sudden death. The violence shown in the fever often abates, and the physician declares his patient to be better, when it is nothing but the symptoms of approaching death, and sometimes the medicines given by physicians, as the spirit of sulphur and vitriol which they seem too imperfectly to understand, and only coagulate the fluids, thicken the blood and stop circulation, enrage and promote the heat of the blood, and by reason of the obstruction a gangrene and mortification is caused, and fevers which end in death. This they call a putred fever, and sometimes a nervous fever, for the violent heat of the arterial blood will cause nervous symptoms, as spasms, convulsions, delirium, and titulation ; all these I have observed have been produced by those medicines, coagulating the juices and impeding circulation ; therefore beware of these sour

drops as they are generally called, for I am sensible that many who have died of the disease called the slow and nervous fever, &c. was wholly owing to the thickness of the juices obstructing the circulation, which, being pent up raised the heat to such a degree as to cause putrefaction. I have often observed the medicines that have been left by physicians, would cause great difficulty even if the fever was not mortal; therefore I think I have good reason to reject them. I never have lost one in my life when I was called before the gangrene was seated. There are more killed in these fevers by the ignorance of the physicians than by the fever, if there had been no medicine given. It is evident that those who die of a choleric, a gangrene comes on before death, and in those of a dysentery the same appears by dissection, so that in all obstructions either in the blood vessels or in the bowels, we should endeavor to promote evacuations and give attenuants for thinning the juices. This line of conduct must be followed or mortal consequences will follow; for it is a sacred truth that whatever thickens the juices and obstructs circulation in the body, acts as a poison. Further, a gangrene is caused outwardly by freezing; the part which is frozen must be brought too by the application of cold water or snow, and then the sore is to be cured as a burn.

*Chlorosis* or *green sickness*. This disorder virgins are subject to, and women who do not use copulation; the symptoms are paleness of the face, a blueish circle under the eyes or redish inclining to black, a slow fever, unequal pulse, vomiting some times and a suppression of the menses; but a bare suppression is not the cause of this disease, and is only a symptom of it. The disorder is occasioned by a want of heat and vigor in the system. In cold phlegmatic women the circulation is slow and cold humors lodge on the glands. There is not sufficient heat to digest these cold crude particles, whereby the whole constitution suffers; the stomach is not able to perform its digestive office; the patient is affected with a loathing of food and longing for unnatural things, as coals, chalk,



sinders, clay and red earth ; marrying will generally put an end to the disease, yet it cannot always be obtained ; therefore we must propose such medicines as heat the blood and quickens its motion ; as bitters with hot spices and challybeates. Take wine one quart, filing of iron two ounces, cloves one ounce, cinnamon half an ounce, mustard seed in powder two spoonfuls, blood root in powder one spoonful, prickly ash bark two spoonfuls, sweet flag in powder half a spoonful, and steep these in the wine two days, frequently shaking, take half a glass in the morning, walk about, use exercise, rise early in the morning, and at night take twenty five drops of elix. proprietatus.

*Menstruation.* Women only are subject to this, though some have never had it, yet remain in health. This flux proceeds from or is occasioned by the superfluous chyle which the natural heat of a woman cannot digest, there being more superfluous chyle in a woman's blood than in a man's, and their heat and vigor not so great ; therefore it is separated from the circulating blood and passes off through the ducts of the uterine vessels, where they cannot pass by reason of the thickness and largeness of the particles, being larger than the proper circulating blood, so they are lodged in those ducts until they are full, which in a healthy woman is once a month. If this menstrual flux be too thick to pass, it will cause pain at the time of its discharge, or will be suppressed. The quantity discharged is from five to ten ounces in a healthy woman. It may be noted that women with child do not have this discharge by reason that the child in the womb is wholly nourished by the chyle of the mother through the umbilical chord or naval string. The milk is produced from the chyle with but little alteration ; therefore women who give suck have not this discharge, if they give out a good quantity of milk. It is said by many, and not without reason, that both men and women have this discharge, though not in the same way or manner. Men, old women and young girls, once in a month, discharge a larger quantity of urine than at any other time, and this answers the purpose for health as the menstrual flux does in women, who have it at the

usual time. This flux begins in women at the age of fourteen and ends at forty five ; yet it does not always happen so, for some have had it begin at eight or nine and continue until sixty or seventy years of age.

*Obstruction of the menses.* Those women who never had a flow of the menses, are not to have them promoted, for it is the sole work of nature ; but if it be otherwise, they must be assisted by medicines. Chalybeates are not safe for a person of a cholic or sanguine temperament ; but for the cold phlegmatic, they are the best. For a person of a sanguine complexion, take the juice of wild fluor de luce six spoonfuls, take brandy half a pint, mix old blood root in powder two spoonfuls, a syrup of mallow one gill, let the patient take one spoonful every morning, or you may take black helebore in powder one ounce, aloes one ounce, mix these to pills in syrup of buckthorn or syrup of stinking horris and elder flowers, and take as before directed ; but if the patient be phlegmatic, take the filings of iron four ounces, cider one pint, steep them together two weeks, and the iron will be dissolved, then put the cider into a clean bottle and add to it one pint of brandy, one ounce of cloves, one ounce of cinnamon and a spoonful of the juice of horse radish root, let this be taken twice a day in the sum of a large spoonful or more, dulce five grains and flour of sulphur ten grains mixed together, and take this every morning.

*Of difficult Menstruation.* The patient, in the time of the menstrual flux, has excessive pain, resembling that of the cholic, or labour pains, or of hysteric fits ; it is occasioned by the thickness and sharpness of the menses. To remedy this, use spermaceti oil or the oil of linseed ; a tea spoonful of flax-seed taken several times a day is a most sure medicine, and its efficacy I have frequently attested. The menses often force through unnatural passages, as the eyes, ears, &c. or cause spitting of blood, which is hard to stop ; but flax-seed is the best, or powder of comfrey and syrup of mallows is good.

*An immoderate flow of the menses* cause pain in the back and

disorder of the stomach. In women advanced in years, it is difficult to obtain a cure. They are generally scrofulas, and this flow should not be stopped suddenly. The cortex peru or peruvian bark is a medicine that will effect a cure ; bares bate given in brandy scarcely ever fails ; hackmetack balsam is good and safe, mixed with loaf sugar ; sarsaparilla tea may be used as a common drink.

*The fluor albies or whites.* This flux is sometimes white, green, yellow or blackish ; sometimes sharp and corroding and very foul. The symptoms are paleness of the face, pain in the small of the back, swelling of the feet, and sometimes of the eyes. The cure depends on strengthening the blood. Sometimes there is an ulcer of the womb which is taken for the whites ; this may be known by this, viz. the matter discharged is bloody, and there is a great itching in the mouth of the uterus from the beginning, and is often attended with great pain and heat of urine and strangury. This must be treated as ulcers, with balsams and turpentine given inwardly and sometimes injected into the cavity ; merc. dulc. is often given, and a decoction of sarsaparilla, fever bush, and sassafras root will sweeten the blood and often effect a cure of this disorder. Isinglass, comfrey, solomon seal root, cohush root and flax seed may be used in a decoction. Hackmetack balsam or its bark is preferred before all others yet known.

*Uterine Furor* is a particular kind of madness which enrages women to lust and desire coition, and if they obtain it they are more phrenzy. It is caused by an over heated semen and must be cured by such medicines as are cooling and abate venereal appetites, such as mullen, elder, spotted arsmart, the liver worts and camphor ; the patient must abstain from all salt meats and spirituous liquors.

*Conception and Pregnancy.* The usual signs are suppression of the menses, loathing of food, sinking of the eyes, water pains, a great flow of saliva, frequent vomiting, livid cheeks, sweats of the belly, slow pulse, &c. and most of these symp-



toms are to be observed in hysteric women that are not with child, therefore we must make good enquiry before we give judgment. Some women have the menses for the three or four first months of their pregnancy, and some have it quite through the nine months, therefore we may be deceived. Pregnancy differs from the dropsy; the dropsy in the face is very pale, but in the other case the face is very red for the most part. The cause of barrenness in a healthy woman is what has put many physicians to their trumps, and they suppose the fault to be altogether in the woman, but experience teaches us that this is not the case; it is often in the man, for I have known many men who have had longing wishes but no children, have died, their wives married again, and then had children, and so on the contrary. Therefore we may observe that if both are not equally tempered in the conjugal embrace they will not produce. Sometimes a woman will have one child and then cease forever; others will cease many years and then bear children. Conception and pregnancy afford a large field in which philosophers may range and make many speculations. I forbear more.

*Mola* is a fleshy substance growing in the womb; sometimes there are several, but generally only one; sometimes it grows in a few months, and others are many years growing. They are known from a child by falling to any side of the woman when she turns; these are hard to be brought away, but sometimes come off by giving strong physic. A watery mola is made up of great number of hydatides connected together by blood vessels. A windy inflammation of the womb is occasioned by wind being pent up in it; this deceives the woman and makes her think that she is pregnant, for her breast swells and sometimes have milk; at times they go in this condition a year, but it often breaks away sooner. If the swelling does not arise in the middle of the body, but extends equally every way, it may be cured by physicians, that is, if it will not come away of itself.

*Dropsy of the womb* is when clear water is shut up in the womb. This happens to some women who are pregnant, but



abortion will generally take place and the water come away. When this happens to women who are not pregnant, it is very dangerous and can hardly be distinguished from an ascites, and it is to be cured the same way. The surest sign to know it from an ascite is this ; in dropsy the face will for the most part look red and in ascites quite pale.

*Dropsy of the ovarium.* This is when one of the ovaries is obstructed and grows to a prodigious bulk, with water resembling ascites, and is very hard to be distinguished from pregnancy, and it is incurable. I have known one case and the woman died.

*Abortion.* Some women cannot carry a child through her term of nine months, but will miscarry. To prevent this, if the pains come usually at the time the menses used to flow, bleed at that time once every month in the arm until the pain ceases to return. The medicines to prevent abortion are lintseed oil a tea spoonful twice a day, or flax seed in powder, the same quantity mixed with rosin and sugar, or take cohush root, sarsaparilla root and gold thread steeped in brandy, and take every morning a glass; if vomiting continues in the last months of pregnancy it is dangerous. Bleed and give four or five grains of the powder of ladies slipper. If the waters break away some weeks before delivery, it is to be feared that the child is dead, although it does not always happen. There can be nothing done better than to give lint seed oil or the seed itself.

*Of Births,* natural, unnatural, difficult and easy. It is to be observed that some women go longer with child than others, though the usual time is nine months. The true labour pains begin at the loins and tend downwards to the lower part of the abdomen and to the region of the aspubis, hence seizing the buttocks and hips brings a trembling of the knees, also cramps and spasms ; if the pain attaches to the limbs or to the stomach it is a bad sign, and bleeding is necessary. The pains are either cholic or hysteric, therefore use venesection. Take cohush root, pettemorrell root, trumpet weed root, boil it in water to a small quantity, then strain it and add a little wine or

brandy ; of this give the woman a little in the time of her travail. It prevents faintness and forwards delivery, causes the woman soon to get well by preventing a fever ; and it preserves the woman from taking cold. This Indian medicine should be well noted ; if the woman be taken with vomiting as some are in the time of travail, then put in the ladies slipper, which will immediately stop the vomiting and turn it downwards. For the safe delivery of the woman it is absolutely necessary to understand the form of the pelvis and the bones that make it ; for being ignorant of this often causes more trouble than the bad posture of the infant. If the pelvis be formed straight and in a direct line, the woman will have easy travail ; but if it is not, as it sometimes happens in some women, when the bones of the pelvis have dilated and the child pitched its head downwards, its face to the woman's back ; though this is the right posture, yet it cannot come forward into the middle of the cavity of the pelvis by reason of its not being straight, but falls against the bone, that is direct with it, either the sacrum or pelvis, and when so struck, the violent throws in labour will bring the shoulder or some limb forward, while the head will be locked fast behind the bone, and when it is advanced forward one arm often comes first, and then the pains cease ; in this case it is impossible to deliver the woman and child both alive, for the child is in such a situation in the pelvis, that it cannot be put back nor delivered, but must be dissected ; yet if the pelvis is straight it may be put back and turned. Therefore if the midwife knows the make of the pelvis, and that it is not straight, he or she, as the case may be, must be very careful to lay the woman in such a posture as will favor the delivery ; for instance, if he find that the mouth of the uterus be not in the middle of the pelvis, but against the left hip bone, then the woman must be laid on her right side to be delivered, and so on the contrary. But if the mouth of the uterus be over the aspubis, which most generally is in large bellied women, then let the woman lie on her back to receive delivery ; but if the mouth of the uterus be against the assacrum, she must be

borne forward and delivered either in the lap of some person or on her knees. In these crooked pelvises where the waters break away, there should not be a moment lost, nor indeed in any other case, if ever so straight, for the child now presses forward, and if it comes against any of the bones it is apt to turn and come crosswise, this will make a great difficulty in that of a straight line ; therefore the head of the child must be guided straight forward to the middle of the pelvis, taking care not to move it only when the woman's pains come upon her.

The uterus in a right posture is seated in the middle of the pelvis, is of the shape of a pear or gourd with its head downward. The head of the gourd or womb is called the vagina, and is something softer than the womb itself. The womb is called the uterus, but in the time of travail the vagina is so relaxed that it comes to be all one with the womb, and appears as one common bag, and they cannot well be distinguished from one another. The mouth of the uterus is not in the longitudinal direction of the back bone, but oblique like the mouth of a little dog ; therefore the hand must be directed from the bottom upward as if you would reach the naval, the back of the hand crowding against the point of the assacrum, for this way of proceeding helps to enlarge the pelvis in the time of delivery. If you put your hand into the vagina in a direction lengthwise of the body, you will meet the curveture of the as sacrum, which will confound you from finding the mouth of the womb. The larger the child is, the more water there is in the womb ; the higher the child will rise into the abdomen; generally, a few days before delivery, the woman's belly appears somewhat less, because when the child is rightly situated, it pitches its head forward into the cavity of the pelvis, and this is a sign of a safe and speedy deliverance. But if the child is in a bad posture or the womb not rightly situated, it does not easily fall into the cavity of the pelvis.

When the time of true delivery is come, the woman is affected with pain, which increases and returns by intervals ; these pains are in the back and hips, with the bearing down and ooz-

ing of a glutinous matter from the uterus, which just before delivery turns red, a shivering seizes if the pains be true laboring pains, and the mouth of the womb is extended ; but if the pains be false, it will be more closely shut. The motion of the blood is likewise increased, and the jugular and other veins are swelled. In a natural birth where the womb and child are in a right posture, there is no need of any assistance only to receive the child, to cut the naval string and to tie it, which should be about four inches or finger's length from the belly—then the after-birth must be extracted. Some women, and especially those in years are more apt to be attended with difficulty than those who are younger ; therefore the midwife should introduce one or two of her fingers as far as she can under the child's head, and there hold her hand quite still until the labour pains come on again, and the other hand placed upon the abdomen near the bottom or fundus of the womb, and with the hand within press back the assacrum, and with that without press the child gently forward at the return of every pain. Forcing medicines are never to be given for they only increase the torture of the patient and cause a flooding afterwards, but if the pain be lingering, give anodynes and lenients, as mallows, and flax seed, and if the child lies right, and the mouth of the womb be in the middle of the pelvis, nothing is to be done until nature brings forward the delivery, by the true labour pains. But if the mouth be rightly situated, and the midwife cannot find either the head or buttocks of the child, or any part presenting only the protuberance of the waters, she may be assured that the child is coming crosswise ; then when the waters break away, if she cannot find how to turn it, she may be assured that it will be a difficult case. If she cannot bring the head to the mouth of the womb, she must endeavor to deliver it feet foremost. The delivery being effected, the naval string must be cut, then hold it as a guide to the sewndine or after-birth, which must be immediately extracted, while the mouth of the womb is open. In a large pelvis the womb is apt to pralapse ; to prevent which, the midwife in the time of delivery must sup-



port the mouth of the womb with her hand lest it prolapse and the vagina fall out, which has been a great difficulty with some women.

The navel string, called the umbilical chord, in general surrounds the child's forehead ; but when it is twisted round its neck or any way entangled, it should be loosened. If the chord of the hand, elbow, knee or shoulder should present itself at the breaking of the waters, it may be known in what posture the child is in, and must not be delayed in hopes to bring it away head foremost ; but if it be easiest to come feet foremost, it should be attempted without delay, for in all wrong situations of the infant, the least painful way is by the feet immediately after the waters break away. If the feet can be laid hold of best, instruments are never to be used, unless the birth be monstrous. It is hard to ascertain whether the child be living or not in the womb ; but the woman can tell best by its motion. If the child be dead, it must be extracted without delay ; for a great flooding will often ensue. Sometimes a flooding comes on in the time of the travail, and this mitigates the pains ; for at every pain the flooding increases. In this case the delivery should be hastened, or faintness will quickly follow, and after that convulsions and death. A dead child is hard to be extracted, for it has no motion of itself ; therefore if you can come at the head, enter a hook into the eye or temple, and as the pains come on, you may gently draw it forward, and so continue until the delivery is performed. This is a good method of extracting dead infants ; but it has been very much abused of late, since our modest women will have none but boys to deliver them, who will insert this hook into the head of a living child in a common natural birth, and thereby kill many. Instances of this kind I have known, and several of them lived some time after they were mangled into the world, and the brains of one run out of the wound ! O horrid, inhuman thought ! ! This hook is not necessary, for a small semi-circle of silver or steel may be used to slip over the head, which will bring the child forward as well and I think much better,

than the hook ; yet I do not like either. You may take a ribbon and tie both ends to your left wrist, and with your right hand take the middle of the ribbon in your two fore fingers, slip the bow over the child's head, then gently draw forward the child with your left hand, and guide the head with your right. This will not hurt a living child. But if you cannot come at the head, try for the feet ; if the child comes crosswise and is dead, it must be dissected and taken away by pieces. In this case, she will either have no pain or else be in great torment ; her strength will waste away continually ; therefore she must have cordials to keep up her spirits. Whatever part comes forward first, it must be taken away. I have been called twice where I have had to extract the infant by dissection, and both the women recovered and were as well as usual. In consequence of the neglect of the midwife, before I was called, not taking care, when the waters broke to assist the delivery, the children coming fast, their heads come to the birth with their arms and shoulders to the air, and the womens' pains left them in this condition. The children worried until they were dead, and the midwife waiting for nature to work an impossibility, and deceiving the women about the children being dead, the limbs that had come to the air were very much swollen, and at length I was called and found there was no better way than to dissect them. The arms of one was taken off at the shoulders, then bent, and the body was extracted. The head of the other being in a large pelvis, one arm was taken off, the body turned, and then the other other taken off at the shoulder, and a hook inserted into the back bone ; the situation being altered, the pains came on again and dilated the pelvis, the back bone broke and the child became partly double until its head was relieved from the os pubis, and in this way they were delivered and both soon got well. But this was in a large pelvis, or I should never have performed it without cutting the child into two parts, and extracting one part at a time. Therefore such parts are to be taken away as we can first come at, then

search for another limb, endeavoring to turn the child until the whole can be extracted.

*Of extracting the secundine.* The woman must not be put to bed before the after birth or womb liver is extracted. If the womb liver or secundine adhere to the womb, the fingers must be inserted very gently between to separate them ; at the same time taking care not to lay hold of the womb or uterus, which is known by its being softer than the secundine. If the after birth is long detained, it soon putrefies and brings on torturing pains in the bowels, fainting fits, bleeding and convulsions come on, which are very dangerous ; therefore we must try to have the after birth delivered as soon as possible. The matter discharged is exceedingly foetid. Flax-seed given inwardly, and oil of castor is very good ; blood-root and snake-root mixed together, in the dose of three or four grains twice a day, may be given ; glysters of mallows may be administered, for a strangury often comes on ; elix. proprietatus is given twenty-five drops at a time, with spt. of lavender, &c.

*Of the Lochia.* This is the cleansing of the body after delivery. It continues to flow in some longer than in others ; at first it is almost clear blood, but grows paler as it continues to flow until it is almost white, it is the work of nature and should not be hindered. If the woman is kept too hot or too cold, it will be checked ; but if you observe what is ordered to be given in travail, all these difficulties will be prevented. To promote the lochia some give myrrh, castor and diaphoretic antimony, and to prevent its being too much, they give astringents as crocus martis astringents or the astringent rust of iron ; but you must be careful not to stop it.

*Of after Pains.* These often happen to child-bed women, and are easily helped by frying an onion in neats foot oil, and putting it on the naval, or apply in like manner a bag of wormwood and tansey, it first being heat very warm by the fire ; you may give flax seed oil inwardly.

*Note.* You may give a tea spoonful of flax seed in powder once a day for the three last months of pregnancy, and it will

produce an easy delivery, and prevent the above mentioned pains in a most wonderful manner.

*Many diseases* happen to women in child-bed and often while they are pregnant, as oedimations, tumours of the labia pudendae, or of the external lips of the privates ; these are to be bathed in a decoction of camomile and elder flowers. If a rupture of the pudendae happens it is to be anointed with vintment of comfrey und Solomon seal ; if a rupture of the peren-eum, it must be cured by uniting the parts by suturus, and a strengthening plaster applied to it ; if the breast be swoolen and you wish to dry away the milk, apply a plaster of diachalon ; some dip cloths in rum and lay on the breast, others milk their milk on a hot iron. If one breast swells and is sore, it is seldom cured while the other gives milk. If a tumour comes in the breast and looks scherrous and threatens to come to a cancer, you must endeavor to scatter it if you possibly can.

*Of Milk Fever.* This comes on about the third or fourth day after delivery, at the coming of the milk, and soon ceases of itself most generally, but if it continues, give a little camphor or snake root and a gentle sweat, and this will carry it away. Sometimes a malignant fever affects child-bed women, which causes a tickling of the ears, heaviness of the head, difficulty of breathing, with a weak irregular pulse in all these fevers ; and great care should be had to promote the discharge of the lochia. Blood root and snake root are to be given as in putred and other malignant fevers.

*Of the Miliary Fever or Febris Miliaries.* Women in child-bed are most liable to this. It breaks out like little bladders, which are filled with whitish water, this sometimes turns yellow ; small red pimples are often mixed with them like the rash, this they call a compound miliary fever ; if a diarrhoe happen in this fever, it is very dangerous, for it stops the eruption of the pustules, causes trembling, difficulty of speech and sometimes difficulty of breathing, and last of all death. To cure this fever use camphor, diaphoretic antimony, snake root, sage and all sweating medicines. A delirium in this fever is a symptom of



the worst kind, for it generally terminates in death or *veræ* mania, called a true madness or distraction. Sometimes women die suddenly after delivery, to the great astonishment of all beholders ; this happens by an internal *amerism* which is found by dissection and is occasioned by women being overstrained in the time of delivery.

*Of the prolapsus Uteri, or the falling down of the womb.* This at first only hangs out in a small quantity between labia pudendae or lips of the privates, increasing to the bulk of a goose egg, and sometimes as big as a child's head, and hangs down to the knees ; it is for the most part occasioned by the *fluor albus* or a difficult birth. The part so prolapsed is to be put up and strengtheners used both internally and externally, and astringents may be given in wine, as *cortex peru*, *chokberry bark* or the bark of *sloe root*, &c. Fermentations are to be applied externally to the prolapsed part ; but if it mortifies there is no cure, although some pretend to perform it by excision ; yet I cannot recommend the practice, not having had experience, for I have always succeeded without excision, and think others may by proper attention.

*Of Childrens' Diseases.* They are very full of humors generally, and almost all their disorders proceed from one and the same cause, a sour acid, from which come sour belchings. There is nothing certain to be known by their pulse or urine, neither can they tell their feelings themselves, therefore we must enquire of their nurse whether the symptoms have continued long and if they vomit their milk ; if it comes up coagulated, or if they seem to have griping in the bowels, sour belchings, hiccups, cough, loose or bound, the color of their stools, whether white, green or yellow, see if they are thirsty or feverish, if their ears run as usual, &c. and all these things considered, we may give a tolerable good judgment of the infant's case. Sometimes they are hereditary, and often take them from their nurse, by the milk, or perhaps she spoils her milk by unwholesome food and by drinking spirituous liquors. The employment of *vascination* upon infants is not a good practice,

and cannot well be admitted. Merc. dulc. two grains, mixed with the flour of sulphur ; ethiopt mineral or rhubarb may be used as a purge, and a tea of cureall is useful. Salt of vitriol may be given as an emetic, but blood root mixed with molasses is better ; some give manna, but it is not better than the following, which are much easier to be obtained, viz. honey, syrup, elder flowers, peach blossoms, syrup of violets, buck thorn berries, the bark of white ash roots ; these made into a tea either single or conjoined, as you please, will work sufficiently on infants.

*Of a purple efflorescence.* This comes on the skin in three or four days after the birth, but sometimes later. A little balm flowers or saffron given in small quantities, is sufficient for this disease, it never requires the advice of a physician.

*Of fevers attending Infants.* Children that have fevers in infancy, are to be treated with such medicines as to remove acidity from the stomach, for that is the fuel on which the fever feeds, therefore give rhubarb in the beginning, then diaphoretic antimony, or if it be stopped at the stomach give blood root or some gentle vomit. Blisters are not admissible, for they penetrate the pores, raise an inflammation and often a stranguary. If tumours arise in or about the neck or ears, or any part of the body as they often do in children, the cathartic must be omitted and the sore brought to suppuration, and the evacuation carries off the feverish ferment and the child gets well.

*Of the Jaundice in infants.* Some children have the jaundice as soon as they are born, and others are born with it and die in a few days, they turn yellow, and the nurse wonders what ailed the infant. For a cure take ground ivy juice and bruised sow bugs mixed together, give a tea spoonful to the infant twice a day soon after it is born ; it is an infallable cure and you need no other medicine.

*Of Gripping in the bowels of infants.* This causes pain and restlessness ; and they discharge great quantities of wind and green stool. In this case give of the oil of anis two or three drops or more. The syrup of mallows and burdock seed

boiled and strained is very useful ; give a little manna first, and then the seeds.

*Of Vomiting in infants.* This is generally of service, for it is occasioned by some ill quality of the milk ; but if it be occasioned by nausea at the stomach, the matter that comes up will be discolored, and the child will retch to vomit. A plaster of spices should be put on the stomach. Some give cinnamon and ladies slipper inwardly in an infusion ; the ladies' slipper is full equal to the cinnamon.

*Of Costiveness in children.* This is owing to some evil quality in the mother's milk, The remedy is mallows tea one ounce in a day or two ; give mouse faces or dung in the quantity of two or six faces, bruised in the mallows tea and given according to the age of the child.

*Of a Diarrhœa in infants.* This is not to be stopped by astringents, for it seldom forbodes any harm, although it may continue for a long time ; but if it make the infant poor, you must purge it with rheubarb, or boil dry whortle berries and give it the water to drink, it cools and astringes.

*Of an Atrophy, or Consumption of infants.* This is owing to an obstruction of the glands of the messentary, which hinders the nourishment of the food from passing into the blood ; hence their limbs become emaciated, their bellies swell and grow hard. They have generally a diarrhœa or liquid stools, are very voracious ; yet their food does not seem to give them any nourishment ; their limbs and joints grow weak and feeble, they sometimes cannot stand alone at the age of two or three years. This is a dangerous disease, and generally ends in death. Young negro children are more subject to it than white ones are, yet many white children are affected with it. The old women and quacks call it the rickets, and give medicines accordingly ; but it is very different from the rickets. It is cured the same way as the consumptions of adults, only once in a while give rheubarb, but the diet and drink must be very thin tea of sarison's wound wort for drink ; fresh broth, milk and water thickened with rice ; and for medicines use colt's

foot, juice of ground ivy, sarsaparilla root, horse-radish root steeped in wine, sugar and syrups are not so good, for they clog the glands and hinder the nourishment from passing into the blood ; raisins, figs, apples, whortle-berries, and many other kinds of fruit are very good, and may be used freely ; cureall may be given once a week in a tea sweetened with honey, and it will answer as well as rheubarb.

*Of Convulsive or Whooping Cough in children.* This is a disease which returns once in a few years in this country, although the same child never has it but once. It is very tedious to be borne, for the child will cough until it is almost strangled ; it will vomit up the contents of the stomach and give ease for that time. This cough proceeds from the stomach, as does the asthma. The cause is a viscid acid matter lodged on the coats of the stomach, or what may be worse, a certain salt communicated by the air, which coagulates the lymph ; this growing sharp and stagnating, overflows and affects the larynx which causes the cough. This kind of cough seems to have a crisis, for it often runs six weeks, and is very hard to cure. We have generally let nature take its own course ; but in some it has been so hard as to bring on other disorders. The cure, if a cure can be obtained, must be began by a vomit, as the stomach and strength of the child can bear, and bleeding, though it does not suit the constitution of children, yet it may be of great service ; gentle purges several times repeated, will serve to wear away the cough ; but for the most certain cure, take of the powder of blood root five grains, if the child be under six months, mix it with ten grains of the powder of snake root, and give the child this quantity for three days, then make a tea of lungwort from the bark of white oak, sweeten it with honey, and give a spoonful of this tea three times a day, according to the age and strength of the child.

*Of Epilepsy in children.* This commonly comes on within the first month after the birth, or at the time of dentition. Sometimes worms cause epilepsy in those two or three years old ; and sometimes it is occasioned by a fault in the milk, or by ul-



cers in the head ; and sometimes by the periodical return of the moon ; this last is incurable. The symptoms are stretching, starting, working the eyes and arms, keeping awake longer than usual, trembling and turning up the eyes ; these are true signs of an epilepsy. For a cure, if the child suck, let the nurse drink a tea of sage, fennel, and piny every morning, which will alter the milk ; then she may take two bags of calomile, dip one in hot milk and lay it on the child's belly, and when it has lain on until it be cold, dip the other in and lay that on, and so continue the shifting of the bags. This has been an approved medicine in many cases. Purging medicines may be used, such as ethiopts mineral, merc. dulc. and oil of sulphur is esteemed a specific by some, and may be given in any cordial liquor.

*Of Dentition or breeding Teeth.* This is attended with itching of the gums, fevers, convulsions, inflammation of the jaws, starting in sleep, a great flow of saliva, vomiting, purging, and sometimes death. A gentle purging is good ; costiveness is a bad sign ; if the child has not a plentiful flow of saliva (for this is extremely useful to promote a gentle purge) the nurse may wrap a leaf of tobacco round her finger and wet it and rub its gums. A simple medicine is as good as the most costly. If the nurse is apprehensive of convulsions, she may give spirits of hartshorn, if costive, ethiopts minerals or blood root in fine powder mixt with honey, every other day.

*Of Worms in children.* If worms come away of their own accord, it is a bad sign, for it shows that something is malignant in the disorder which disturbs the worms ; yet altering their diet often brings them away. The symptoms are itching of the nose, fretfulness in sleep, grinding of the teeth when asleep, swelled belly, a dry cough, great thirst, looseness, the countenance changing from red to pale very suddenly, and sleep with the eyes open. A great abundance of medicines are procured for the cure and most of them fail. There is a kind of small worm placed very low in the intestinal canal which breeds very fast. This is best carried away by taking half an

ounce cloves, a quarter of an ounce of myrrh, and a small handful of wormwood, boil all together in a pint of water down to one gill ; or what is better, take the juice of wormwood one gill, and the same quantity of aloes and myrrh, reduce it to a powder, mix and just scald them, put them into a bottle with one gill of rum ; give the child one spoonful every other day for seven days together, it will operate gently and carry away worms. Some order merc. dulc. four grains, with twelve grains of flour of sulphur ; others give ethiops mineral four or five grains at a dose, and some give powder of tin, and it is as good as merc. dulc. But we have a more effectual medicine, viz. take one ounce of quick silver, boil it in a pint of water to half a pint, then pour off the water and give the child a spoonful once a day ; the quick silver will not diminish, therefore you may have a perpetual medicine, or you may put the quicksilver into the water and let them stand together and pour off for use and fill it up again and give it as before directed. A number of vegetables are used as anthel mintics or warm medicines, viz. Irish cabbage, black elder bark and worm seed. In Africa the worms breed in the skin and are best cured by mercurial ointments, they may be extracted with very little cost to the possessor.

*Of the Rickets.* This distemper was not known to the ancients ; it began about the sixth century in Britain, and spread through Germany. It happens to children at the age of six months and two years ; it seldom proves mortal of itself, but degenerates into a consumption or dropsy. If it is not cured before the fifth year of its age, it will be unhealthy all its lifetime. The cause is an obstruction of or in the medulla spinalis. The signs are softness of the flesh, especially of the legs, crookedness of the legs or of all the limbs, sluggishness in motion, laxiness of the body, slow dentition, weakness of the limbs, and sometimes the bones start to grow to their usual bigness. The cure is to be effected by warm penetrating, deterging and spicy medicines. The nurse must keep the child in motion when awake, though not to carry it too much, for exercise is

the best part of medicine and is the cheapest. Rhubarb may be given once a week in small quantities, and then use the following, viz. cinnamon, cloves and prickly ash bark, all in powder, juice of rue, ground ivy, horse-radish root and sage, a small quantity ; put these into a quart of motheylin with two hundred sow bugs, put the whole into a bottle and let it stand about ten days ; then give the child a spoonful three or five times a day, as occasion may require, and it will not fail to produce a cure. There is abundance of other medicines used, as elix. pro. bals. sulphur, syrup of snails distilled, lay warm strengthening plasters on the back, and bathe the limbs well in camphor and brandy.

*Note.* A good nurse and a light or proper diet is more necessary than the most approved medicine, yet I think that we cannot dispense with either.

*Of an Aphae or Thrush.* This is nothing more than what the nurse calls the sore mouth ; sometimes it affects adults at the going off of a fever. It is caused by acidity and must be cured by correcting it, and then by healing medicines, which effect a cure. Use a decoction of elm bark for a gurgle, or take cureall, devil's bit, crain's bill root and meadow plantain boiled together, give a little of it at a time without sweetening, and this will correct the humor to a wonderful degree ; let the patient chew gold thread in lieu of the Indian weed, called tobacco.

*Of cutaneous eruptions* on the hands and face of children. These are most generally for their health, but sometimes continue so long that a cure becomes necessary. In this case the body must be purged with ethiops mineral and merc. dulc. or some preperation of antimony.

*Of the venereal disease in children.* This is occasioned by their sucking a diseased nurse, and is easily cured by using a tea of sarsaparilla root, sassafras bark and fever bush taken plentifully.

*A treatise on poison.* It is certain that some things taken into the body in a small quantity will destroy life, and these we

generally call poison. But the dispute is whether any thing be poison or not, since use and custom is able to withstand the most powerful of this description ; as for instance, opium and hemlock are violent narcotics, which cause numbness and stupidity of the nervous system, lathargic sleeps, convulsions and death, and this too in giving very small quantities ; yet it is evident that the Turks accustom themselves to take it as our common drunkards do strong drink, and it does not seem to operate on them any more. Opium is sometimes taken amongus without any apparent danger ; if we take the above named things to be poison, that will at any time destroy the human body, we must call all things poison both food and physic ; for it is evident that food is, especially strong meats if eaten. When the stomach is empty and too weak to digest them, if they are not immediately thrown up by convulsive motions of the stomach, the person will surely die in a few hours, as it often happens in or after a fever or too long fasting. Thus it is that some can eat that which would kill others and receive no harm. So if a person is very warm and drink cold water, it will operate as a violent poison, which to another of the same temperature would be entirely harmless. Some persons take it very slowly which in time operates as a poison. Rum and all spirituous liquors are as poison as opium or hemlock, if taken in large quantities and will as suddenly kill ; but taken more gradually the person may survive many years, still continuing the custom of visiting his dram bottle, at last dies and is his own executioner.

*Vegetables* that poison and suddenly kill causes these symptoms, viz. sickness at the stomach, sometimes purging, dizziness, trembling, dimness of the sight, convulsions, hiccups, great pain at the stomach and bowels, epilepsy, cold sweats, swelling of the tongue, black lips and mouth, quick pulse and sometimes a swelled belly ; yet all these symptoms are not exactly alike in all poisons ; then to close the horrid scene the juices putrefy and death makes his appearance. We may further observe that these symptoms are likewise attended with



great heat and often thirst ; if the person's senses remain he will call for drink. All these symptoms we sometimes see in a fever, when no poison has been administered as far so we are able to judge or know. But if we only consider that food and spirit (as the circumstance of the body is) are poisonous and will bring on all these symptoms and death itself, how much sooner will medicines do it if given by those who are ignorant of the disease, or the cause from whence it proceeds. It is evident that our bodies are as a well timed clock ; our spirits and fluids are all in motion, and though some of the nerves are not more than one hundredth part of a hair in bigness, yet it is generally supposed that there is a circulating fluid continually passing through them, and if this juice is not obstructed (as we may say for the sake of representation) the clock goes and would continue ; but when any accident happens to the frame the circulation is obstructed, an inflammation is formed and communicated to all the juices of the body. All the circulations depend on each other and if one suffer an obstruction all must be affected in some degree, for example, the sun in the firmament gives heat and vigor to all parts of the globe, is the life of all animal and vegetable substances, therefore if its rays should be obstructed in one part or another, that must be destroyed, and consequently all the rest of the globe by firing and inflaming the same. So it is with the human frame ; if any of the circulations be obstructed, the body is inflamed according to the greater or less obstruction, and the blood pressing on the obstructed part for circulation, increases the heat until at length it putrefies. If it be in an external part it purges itself, by throwing out pus until the parts unite. The heat caused by the obstruction of any internal part is called a fever; thus an hectic fever comes on by an obstruction of one lobe of the lungs, and the inflammation causes an ulcer that cannot be cured, and by it the body is wasted away sooner or later. So a pleurisy is an inflammation of the lungs or intercostal muscles. This is occasioned by sudden colds which thickens and stagnates the blood, and an inflammation will raise according to the force and

fulness of the blood. So it is with intermittents, though they are occasioned by a relaxation and bracers are often given, for the looseness of the fibres, they will prevent the juices from straining through. A loose bottom sieve will not sift so fast nor so regular as one more tight. All obstructions cause inflammations of the remote parts of the body, therefore we may infer that all things which cause obstructions may be esteemed poison, for they cause inflammations. The same comes on by violent blows, cuts, and gun-shot wounds, which causes contusions and great obstructions ; some working more privately as gross particles in the blood occasioned by intemperance of any kind, as unwholesome food or liquor, impure air or water, violent exercise, furious passions, noxious qualities arising from putrefied animals or vegetable substances, which being communicated to people, cause diseases according to the virulence of the infection, as the plague, small pox, measles, &c. Sometimes I have observed the obstructions, which cause fevers, to come on so fast that they soon occasion putrefaction in the juices, and if the blood be full and high, it will often, if not always inflame the nervous juices and cause all the symptoms of that class. Sometimes it works down and causes a diarrhœa, so that some will die in a few days, and others whose blood is low will often live many weeks. Those fevers occasioned by internal obstructions, let the symptoms be what they may, are one and the same cause and must be cured by the same means as poison, such as attenuants, cathartics and emeticks ; mineral poisons are like fine beaten glass, which stick fast in the coat of the stomach and eat through and cause gangrene. Of the mineral kind as arsenic and corrosive sublimate ; if these are taken into the human body they must be immediately thrown out by a vomit or death will make his appearance. Animal poisons are most generally occasioned by a bite ; it must be drawn out by hot medicines, and immediately too, or the chance of life is lost ; for the bite of a rattle snake or adder you may use fine salt beat up with an onion and often repeated, this is a certain antidote. Some take a pigeon, or a partridge, or something of

the kinn, split it in the middle and apply it warm to the part bitten, and often repeated, this will do the same. Indians use robbin's plantain, &c. ; but snake grease tried out and put on as soon as it is bit is a very good preventative, for it will sheath the part affected and prevent the poison from penetrating the solids.

In all cases of poison snake root and blood root should be used very frequently ; it helps above all things—it thins the juices and prevents the poison from obstructing the circulation in the neighboring parts. Our vegetable poisons are best prevented by a decoction of sassafras, sarsaparilla, fever bush inwardly and outwardly, it sweetens the blood and in a little time cures the poison, and it is well at the same time to use snake root, blood root, &c. once or twice or more if needed. Sweetening medicines are good in all poisons. Mineral poisons cause an obstruction in part as if bruised, and great heat comes on and inflammation, the parts soon gangrene if it is not soon destroyed. The particles if taken into the stomach stick fast in the coats as before observed, and the gangrene first begins and proceeds through the whole course of the elementary canal. It occasions vomiting and purging, and yet the poison comes not away. The patient sweats, but it seems not to do any good, at length a tremor and great weakness seize the body very suddenly, and a malignant fever seems to be formed, therefore the blood has received an obstruction by some gross matter in the vessels about the lungs, which causes a sudden loss of strength though the matter does not seem to cause so much pain in vomiting and purging, as sublimate or arsenic, yet the same sweats will come on attended with blackness of the mouth and tongue. After death the patient will swell and have black and blue spots, therefore a gangrene occasioned by a malignant fever is attended with the same symptoms as that which is attended or occasioned by arsenic or any of the mineral poisons. The plague is attended with a malignant fever, and if the juices putrefy it is incurable. If a plague sore or carbuncle breaks out in the groin the mortality of the plague is prevented ; there-

fore in malignant fevers we are to give the same medicines as for poisons. Bleeding is not to be practiced for it draws the venom of the poison into the blood, therefore a vomit must be given and sometimes repeated. Give very plentifully snake root and blood root mixed or diaphoretic antimony, camphor and all kinds of sweating medicines. Also blisters may be drawn on the limbs to prevent, in some measure, the heat on the more essential parts of the body ; you may likewise give softening medicines, as oil of tennet seed, oil of olive, and for a tea, mallows, sarison's wound wort, and apply strong poultices to the feet. This method is to be followed both in malignant fevers and in mineral poisons of all kinds. If a person be hurt by a salivation give him flour of sulphur, bals. of sulphur, and the like on the other hand.

Vegetable poisons of all sorts occasion soft swellings, and either draw the parts into contact and thereby cause convulsions of the stomach, in order to throw themselves out by vomiting or pass the stomach unfelt and irritate the bowels, so that they are thrown off by stool or cause a numbness of the parts to which it is applied, so that there is no motion, and thereby exciting pains which cannot be felt, and the person drowns into a sound sleep. These poisons are called narcotics, they weaken the body and do not cure some others, which neither work themselves off nor occasion superfluousness, yet they swell the flesh, and in a manner putrefy the juices, as ivy, white dogwood and some others. All vegetable poisons tend to putrefaction ; for if the poison is not thrown out by vomit or cast off by stool, an obstruction will be formed which will cause a fever of the putred kind sooner or later, and though a fever is not putred at first yet it will soon be in that state if not removed, and will end in death. In some constitutions, though very rarely it is the case, a vomit or purge will not carry off the poison ; yet the strength of the circulation is so great that it will cleanse the passages and wash away the poison. The physic of vegetables cannot stick nor lay so strong a hold of the solids as the mineral vomits and purges ; therefore the shop-



pedlers, who purchase them, then deal out as their people wish, destroy multitudes of good constitutions and render them weak forever.

It will now appear that those persons who are affected with vegetable poison of all sorts receive obstructions in a greater or less degree, and that these cause fevers that work faster or slower, according to the force of the blood ; thus, if the person be old or has but little force in the arterial system, the symptoms will be mild at first, as a small pain in the side or stomach, dulness, heaviness of the head, sometimes a purging will come on and blood stools ; the person keeps about complaining of some illness, as cold shivering, often some sweat, he grows weak, some are hungry and others loose their appetite and voice, have a cough and often a dry one ; but young sanguine persons have more violent symptoms, for soon after the poison is received an obstruction is occasioned in the blood vessels, which appear like a violent contusion ; the person is red in the face, has a pain in the side, stomach or bowels, and by turns is delirious or very stupid, often sweats ; others will not sweat, but are exceedingly hot to the touch, often have great heat and distress at the stomach, some vomit but are not relieved, others purge but are not eased, their bellies swell and they send forth a disagreeable smell before they die, their blood becomes thick and corrupt, then putrefaction ensues. This is the effect of vegetable poison remaining in the system. The same symptoms happen to those who are affected with mephitic or deadly air, or by unwholesome food, by a surfeit or too much exercise. When the blood becomes thick, the person falls into a fever, first by the bile being thick and stagnated in the small veins of the liver, or as the more learned say, the bile ducts, and by this obstruction, as we have so frequently observed, comes a putrefaction which spreads itself through the whole mass of blood, and the inflammation arises according to the force of the blood in circulation. The nerves are affected more or less and the person becomes stupid or delirious and sometimes even tending to raving madness and often is

seized with convulsive motions, trembling, weakness and likewise pains in the side, stomach and bowels, the blackness of the mouth and tongue, and the swelling of the belly, &c. and after the death the body becomes spotted and sends forth a smell as odious as some bodies that have been dead many days.

Therefore as putred fevers and vegetable poisons produce the same symptoms and at last the same disease, we must use the same medicines for a cure. Sweating medicines are of no service but rather do harm, for they cause the thinner parts of the blood to be exhaled and leave the grosser. Blisters likewise do harm, for cantharides enter the pores, heat and inflame the blood and enrage the fever; they do not serve to bring away the coagulated matter, but increase it. Spirit of vitriol or sulphur is right down poison in these fevers, fevers occasioned either by poison or what we generally call fevers. This last is occasioned by a poison, although by what kind we know not, but we must judge it to be poison, because it produces the same symptoms and follows the same course; the above medicines, by their corrosive property and acidity thickens and coagulates the blood and soon cause putrefaction by increasing the obstruction. Therefore in the first place the blood is to be attenuated, and for this some give tartar emetic antimony for two or three days, and then a small cathartic; others use calomel five or six grains mixed as before; merc. dulc. may be used in the same manner and then give physic. Doctor Fessot used the smoothing mucilagenous medicines for these fevers, and it is true they will keep down the inflammation; but I think do not divide the grumous parts of the blood on which the cure depends. Blood root, snake root and diaphoretic antimony mixed and taken a few days will divide the gross particles of the blood beyond any thing known. A portion of the juices of wild fluor de luce must be given to carry it off, or if the person has a strong constitution, you may give a potion of jalap, it works well up and down and shakes off all the offensive matter that may be lodged in the stomach or intestines.

*Of poison communicated by the bite of animals.* This is occasioned by the rage and venom of the animal. The poison is contained in the animal spirits, and infuseth itself through the pores faster or slower, according to the nature and velocity of the animal. The more thin and subtle the poison is, the sooner it is defused abroad and affects the whole mass of blood and juices of the body. Thus the poison of an asp is more thin and subtle than that of any other creature known. It kills in about three hours ; that of a rattle snake in six or seven hours, but that of a swift or adder is a thick slow poison, which consumes the moisture of the animal body, to which it is applied by degrees as a consumption. The person affected may live a year perhaps before he dies. The tarantula conveys a very subtle poison when he bites and is said to be as subtle and thin as that of an asp, and rather more so, for its poison is diffused all over the body in an instant, if we may so speak, that is, in a very short time compared with some others. It at once deadens and checks the very life of the animal spirits, and as spirituous liquors rarefy the blood and raise the animal spirits, so this poison is of a contrary nature, for it at once quenches the most subtle parts of the nervous juices, and though this poison in a short time occasions death, yet it is cured by music and spirituous liquors.

Animal poisons of all sorts consist in a subtle penetrating salt, which as soon as mixed with fluid of a contrary, tinges the whole mass, and that too according to the degree of heat those saline particles cause in the juices which they affect, and the obstruction will be greater or less as they coagulate them. Thus the circulation being hindred, the body swells and a great heat will be contracted by the blood being pent ; a putrefaction will follow according to the circulation. Sometimes black sores and boils break out on the skin, and these we may consider as most efficacious in its purity. Some animals have their poison so lodged with these salts as once to heat and stop all motion as fast as they can spread over the neighboring parts, in the same form as a gangrene or mortification, until the

person dies. Other animal poisons carry an extreme heat and change the saline particles of the blood into an acid salt, which will corrode the muscular ligaments and even the substance of the nerves, as a canker does, which we call the throat distemper, and this we take as an example of poison. Sometimes this acid salt will so corrode as to destroy the part with great gain as a cancer does. Therefore I think we may with propriety say that a cancer is occasioned by a poison, which is generated into the blood.

The disorder called the hydrophobia, occasioned by the bite of a mad or distracted dog or other beast affected by the dog, is occasioned by a peculiar poison, for it will neither putrefy, gangrene, nor canker, but is infused by the saliva of the mad-dog or animal. The wound will easily heal, yet after some time the poison will be communicated to the nervous system or juices, and the person or animal so bit will become mad and soon die. All animals that bite in rage are poisonous. Nay, the sting of the bee, wasp, hornet, and the bills of gnats, mosquitoes and many kinds of flies, when applied to the flesh show their poisonous effects, by the swelling and obstruction of the parts to which they are applied, which is in proportion to their bigness, and as large as any other animal. From what has been said on animal poison, it appears that they become mortal or occasion mortality by causing obstructions and raising heat and fever as all other poisons do, and I think may teach us that the diseases of the body are occasioned or produced by obstructions, and these proceed from the above mentioned causes. If the acid salt in the animal poison will cause swelling, gangrene and putrefaction and corrode the muscular substance of the body with great heat and pain, I think that we may with propriety say that cancers, cankers and all those diseases which operate by destroying the solids work by the same agent, viz. an acid salt. We must administer cooling medicines, as the distemper shows itself only in the skin, yet the salt being in the mass of blood, medicines must be given inwardly to check and



weaken those saline particles, that are working the utter destruction of the beautified fabric of human nature.

In a cancer or canker, or even in the shingles, we must give internal mucilaginous medicines as well as external applications. Give internally several times a day a tea of mallows and mullein, sarison's woundwort and basswood bark steeped in water and used externally for a wash ; use devil's bit, cureall, crane's bill, cancer root and sweet fungus or bears' bate. The part must be covered with a thin cloth and wet it as often as it dries. If the disease be in the throat, use gargles, and at the same time give inwardly a decoction of basswood, mullein, elder root, sarison's wound wort root and spotted arsmart once a day or more if needed. Give salt petre or cream tartar once a day ; rattle-snake oil, dropped into a cancer or canker, will cool, molify, check and blunt those fiery salts above all other medicines known to man.

The throat distemper, in New-Englnnd, called a canker in the throat lasted several years, and sometimes was very mortal. The most able physicians were puzzled in the cure and the cause of it, and it really seemed to me that their endeavors to cure the disorder only helped on the disease and promoted the strides of death. I think there is not a doubt but that the disease was occasioned by some noxious quality of the air, which like a poison caused the more saline particles of the blood to become acid and cause obstructions in some parts of the body, and the epeglates being a soft spungy muscle, the disease is first observed in that, though the whole mass of blood may be affected. It sometimes operates slow when in any external part of the body, and often very acute when on the lungs, and the person would generally die in a few hours, if it affected those with the least blood, and those generally who had had the small pox or some other disease that had lessened the fuel. The method which the physicians pursued at the time, was to give a vomit first, then applied diaphoretics and blisters. The vomit did no harm but the blisters did, and after the eschar would not be healed, though the person should live. The di-

aphoretics did neither good nor harm. Some gave cathartics which emptied the intestines and occasioned the canker to proceed to the vitals or bowels, which caused death. Then they took up with giving them bracers, which hardened the parts affected, and kept back for some time. In this case they gave cort. peru ; but this failing (for although it kept the salt from preying on the muscles by its astringent quality, yet it never dissolved the acid salt, but blunted its sharp corrosive quality) they at length hit on another method, which was to give calomile and raise a spitting ; this weakened and emptied out those acids which corroded the parts. It was observed that rattlesnake's grease would blunt the salts and prevent corrosion ; by which circumstance it really appears that acid salts are possessed of a corroding quality, and may be communicated by the poison of an animal ; or the saline parts of the blood may be changed by some noxious quality of the air, become corrosive and destroy and consume the muscles. It may be so changed by things eaten or drunken, as to destroy the natural texture of the blood and change the saline parts into an acid ; by this means they coagulate and obstruct the juices, and a fever is raised. Thus we see that these salts, which are the basis of all diseases, are transmitted from their natural principle and substance into an acid corrosive salt, and thus destroy that which they were wont to maintain. This we may see by mixing a drop or two of spirit of vitriol or sulphur which is loaded with acid salt, with milk, will immediately coagulate it, and thus change it into two substances, viz. curd and whey, and these can never be translated into milk. Blood is of the same nature with milk, and a few drops of those aforementioned acids will have the same effect on new drawn blood ; therefore I think it does not appear at all strange that poisons and diseases caused by acid salts should be incurable when they turn the blood into curds and water, even as milk is changed.

All our fevers that putrefy or occasion putrefaction are from this cause, an acid salt, which lentors and thickens the blood, so that an obstruction is raised and a fever ensues. Now these

fevers from this very cause have been the principal fevers in this vicinity, and indeed all over the State for many years past, and since I have had the opportunity of observing the practice of the physicians, I do not wonder that so many have died in these fevers, for the doctors in their great wisdom and learning, or learned philosophy, which I think in truth is nothing more than hypothetical reasoning, and that will not do in these cases, for experience daily testifies against it with the most cogent arguments. They gave their patients hot medicines and thereby their blood became heated, and raised it to a high pitch; then they gave those sour acids, which are loaded with those salts which I have so often named, as *elix. vit. spts. vit. or spt. sulphur*, and those were given to perform the cure, and indeed they did with a witness, viz. by death.

I should not have proceeded thus far in explaining to you the nature of the acid salt, which acts as a poison on the human fluids, had it not been a safeguard to you, that you might not follow the steps of your predecessors in destroying, by the agency of this poison, great numbers of the human race instead of curing them. From what has been advanced on the subject, I think it appears both plain and reasonable that the juices are acted upon in the manner stated by the poisons and acid salts, and needs no other evidence, but a close application and diligent attention to the subjects themselves, and then each one will see for himself and not be led away by quacks who continually practice "*cum ignorantia medicinae.*"

I shall now close this treatise by making a few general observations on the different temperaments in the human body.

In the human body there are four different temperaments, viz. the choleric, melancholic, phlegmatic and sanguine. In choleric constitutions the blood is hot and thin, and moves fast. In those of the melancholic, the blood is thick and heavy and moves slow. In the phlegmatic the blood is watery and slimy and moves slow, and in the sanguine the blood moves freely through the vessels of the body. The heart contracts about four thousand times in an hour, according to the different ages

and sexes. There is, it is generally estimated twenty five pounds of blood in a man's body, that is, taking the whole mass, or is equal to that, and it passes through the heart ten times in an hour, that is, once in six minutes.

The number of bones in the human skeleton, preserved together as much as can be in their natural situations, are as follows:

The head 60, the body 64, the lower limbs 60, upper limbs 60—total 244. There are also 48 others, called assasesamode or articulated bones, &c.

Perhaps it would not be disagreeable to many readers to have Mr. Quincy's List of the bones of the human skeleton; I will therefore subjoin it here for their particular gratification.

Os Frontis	1	Vertebrae Cervurs	7
Os Ouepitis	1	Vertebrae Dorsi	12
Ossa Parietalia	2	Vertebrae Lumborum	5
Os Temporum	1	Vertebrae Ossid Sacri	6
Ossicula Auditus	8	Ossa Couggis	3
Os Ethmoides	1	Ossa Seapulae	2
Os Sphenoides	1	Oss Claviculae	2
Ossa Malae	2	Ossa Costae	24
Ossa Maxillaria	2	Os Sternum	1
Ossa Unguis	2	Ossa Innomenata	2
Ossa Nassi	2		—
Ossa Palatia	2	Total of all the bones	
Os Vomer	1	in the body	64
Os Maxilla Inferior	1	Ossa Humeri	2
Ossa Dantes Incissivi	8	Ossa Ulnae	2
Ossa Canini	4	Ossa Radi	2
Ossa Molares	20	Ossa Carpi	16
Os Hyoides	1	Ossa Metacarpi	8
	—	Ossa Digitorum	30
Total of the head	60		—
		Total in the upper limbs	60



Ossa Femoris	2
Ossa Tibiac	2
Ossa Rotulae vel Patellae	2
Ossa Tibulae	2
Ossa Tarsi	14
Ossa Metatarsi	10
Ossa Digitorum	28
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Total of the bones in the lower limbs	60
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*Nervous Simples* are cardiacs, cephalics, carminatives and anti-hysterics. These medicines are good for the head and stomach, and expel wind from the bowels, they are also good for the nerves. Strengtheners are agglutinant, astringent and absorbant. They add to the firmness of the solids. Stomachics—all nervous medicines, such as bitters, have a claim here. Balsamics are such as soften, restore and heal; and of this class are emollients, resboritives vulneraries, detergents and balsamics. Sturnatatories, are sneezing powders; narcotics are those which cause sleeping, of such are anodynes and opiates. These are called poison powders by some; they ease pain to a wonderful degree. Coolers are sometimes used in fevers, &c. Topics are repellents, ripeners, drawers, detergents, &c. Diuretics remove obstructions in the urinary passages. Diaphoretics occasion a sensible discharge of the skin. Emetics are generally called vomits, and their manner of operating is well known to all. Cathartics are called purges, physic, &c. and this is also well known.

*A few hints concerning the circulation of the blood.* When the circulation of the blood is quick, the temperament of the body is sanguine or choleric; but when the circulation is slow, then the temperament is phlegmatic or melancholy; when it is compact and firm, the constitution is equally strong; when it is lax and delicate, the constitution is weak and feeble; when bile or phlegm prevails in the fluids, the complexion corres-

ponds with the humors, and is accordingly called bilious or phlegmatic. Thus from the different stamina and mixture of the fluids in every individual, arises that peculiar disposition, why some kinds of food are hurtful to some and not to others ; why one thing will agree with a person at one time, and which will hurt him at another.

REMARKS ON DIFFERENT VEGETABLES.—*Bitter Sweet* or *Felon Wort*. You may tie the leaves about the neck for dizziness of the head. Bruise the berries and apply them to the felon or whitlow ; it is a certain cure. Take a pound of the vine and leaves, bruise them and infuse them into two quarts of water twelve hours over a gentle fire, then strain it out ; it is good for opening obstructions of the lungs, and liver and spleen ; for all difficult breathing, bruises, congealed blood in any part of the body, yellow jaundice, dropsy, and for cleansing women who have newly laid in. You may give one gill of the infusion every morning, it purges very gentle.

*Seneca*. This is good for all green wounds, inward bleeding, and for humors in any part of the body. The decoction juice and powder in drink, and the juice outwardly. There is not found such help for man when the disease falls on the lungs or throat. It heals all putred ulcers in the mouth or throat. A decoction of the leaves and root with a little honey, will stay women's courses ; it likewise cures ulcers of the kidneys and all pains of the bowels, it also helps ruptures, &c.

*Sarison's wound wort* boiled and drank in the jaundice, dropsy and all inward bruises is very useful. The decoction or the expressed juice of the plant heals green wounds, or old ulcers in the mouth or throat and cleanses them if ever so foul. It is also very good for burns, scalds, canker, &c.

*Solomon Seal*. The white sort bruised and put in wine or other drink and let stand one night, and use it as a common drink, will afford great help to ruptures, or as they are generally called, Hernia, occasioned by falls, &c.

*Tobacco* ; the seed helps the tooth ache. The herb bruised

and applied to the scrofula or king's evil, helps in nine days. The juice is very useful applied to old ulcers. A good salve is likewise made of this herb, which is very advantageous to all hard tumors and swellings occasioned by blows or falls.— Make the ointment of the juice with white pine turpentine and bees-wax.

*Ground Ivy* or *cat Foot* is hot and dry. Use a decoction for all inward bruises, wounds and ulcerated lungs ; it eases all griping pains of the stomach and bowels, and helps the jaundice by opening the gall ducts of the liver. The juice of the green herb speedily cures cut wounds of the flesh. If you put to the decoction a little honey and burnt alum, it makes a noble gargle for the mouth or the throat, and is also very useful for the wash of old sores, ulcers and cankers. The juice of the ground ivy, with the juice of celendine clarified with sugar, is an excellent wash for sore eyes, such as pain, redness, watering and web-skins or films of the eyes. The juice, with verdigris and a little honey, is an extraordinary medicine for cleansing foul ulcers, and prevents the canker from spreading and corroding the parts. They must be boiled together.

*Angelica.* The root may be steeped in wine and taken in the dose of two or three spoonfuls at a time ; it eases the pain occasioned by cold and wind. Take some of the root in powder at the beginning ; it helps the pleurisy and other diseases of the lungs and breast, as the phthisic, consumption, shortness of breath, &c. Syrup of the stalk will do the same. The powder of the root put into ulcers cleanses and gives ease to them, and causes them to heal, by covering the bone with new flesh and skin.

*Wood Bitony* has a top like a hop. The herb, either green or dry ; the root may be made into conserve, syrup, electary, or powder. It helps the jaundice, convulsions, shrinking of sinews, gout, dropsy, and all coughs. The powder mixed with honey is good in all coughs, shortness of breath, and in all diseases of the lungs which cause consumptions. A drachm of the powder with a little honey, will stay the bleeding at the

mouth or the nose, or it will hinder the passing of bloody urine. It is likewise good for those who are troubled with ruptures occasioned by a fall or otherwise. The juice heals green wounds and old ulcers.

*Burdocks.* Bruise the leaves for old ulcers, and use the compressed juice. This may be used with the white of an egg for a burn, it extracts the fire in a wonderful manner ; a decoction of the leaves may also be used for the fomentation of any fretting sore or canker ; an ointment made of the liquor with hog's lard, nitre, and vinegar boiled together. The root preserved with sugar is good for a consumption.

*Camomile.* A decoction of this takes away all pains in the side by bathing ; and there is nothing more profitable than this for the liver and spleen ; it adds comfort to the patient in the cholic and stone, and all pains of the belly whatever. It may be used in all hard humors and shrinking sinews, cramps, and pains of the joints. The juice made into a syrup with sugar, will dissolve the stone ; it is also good for convulsions in any part of the body.

*Comfrey* is good for outward and inward bleeding, bruises, cuts, ulcers of the lungs, and women's whites and reds ; for all these you must make them into a syrup ; the root, by being beat up and applied to green wounds, helps heal them very much ; it likewise eases the pain of broken bones ; it gives ease in the gout by being applied in the form of a plaster.

*Wild Fluor de luce.* The juice or decoction of the green root purges and cleanses the stomach of gross humors ; it is also useful in the dropsy and jaundice ; it operates up and down ; and is not to be taken without honey or molasses. It may be used as a drink ; eases the pains of the belly and sides ; and is very useful in diseases of the liver, stone, convulsions, cramps that are occasioned by cold humors, cholics, urine, &c. ; it will also bring down women's courses ; expels phlegm, and is very useful in the rheumatism, and may be applied whenever the pain appears to be seated. The root, green or in powder, cleanses, heals and incarnates wounds and ulcers where the



bone has been laid bare either by the wounding instrument or by corrosive humors. It cleanses and heals festulas and canker that is hard to cure.

*Wintergreen.* The herb or juice being made into a salve with hog's fat or lard, bees-wax and turpentine, will heal all manner of green wounds and sores. It helps foul ulcers which are hard to cure, canker, festulas, bloody flux, inflammation and women's courses.

*Crow Foot or Yellow Weed.* The leaves or flowers of this made into an ointment will draw a blister ; and the same being mixed with mustard seed, I think will do as well as Cantharides or Spanish flies, and with far less danger to the urinary vessels.

*Saffron* quickens the brain, helps a consumption of the lungs, difficulty of breathing, small pox and measles ; and is a notable medicine in the jaundice ; ten grains of the flower is enough for a dose.

*Mullen.* The decoction is good for ruptures or cramps and convulsions and an old cough. An infusion of the flowers is useful for the piles, it opens obstructions of the bladder and kidneys ; the leaves with sage, marjoram and camomile make an excellent bath for limbs affected with the rheumatism. A powder of the flowers taken in molasses or honey, are an excellent remedy for children that are troubled with what we generally call the belly ache. A decoction of the root is useful as a bath for a swelling of the throat, &c.

*Mug Wort.* The root made into an ointment with hog's lard will take away wens and hard knots and kernels which grow about the neck and throat. Three drachms of the powder taken in wine with camomile and agrimony, and the part afflicted bathed with a decoction of the same very warm, is an excellent medicine for the iliac passion or cholic ; the juice may also be taken to prevent the operation of opium or other narcotics.

*Eye Bright.* If this herb were only used as much as it is neglected, the trade of spectacle making would be useless. The juice or distilled water taken inwardly, or dropped into the eyes

will perform astonishing cures in all their infirmities. A conserve or an electuary made of the powder has the same effect. It must be made with sugar.

*Golden Rod* is inferior to no herb for its virtues in the cure of all green wounds and inward bruises. It stops all bleeding in all parts of the body ; it is also useful in fluxes, stone, women's courses, ruptures, &c.

*Marigolds* are but a little inferior to saffron. The leaves mixed with vinegar, and any pained part bathed instantly gives relief.

*Hysop* boiled with rue and honey, gives those who are troubled with a cough great ease. It is useful in rheumatism, and in disorders of the lungs ; it is likewise extremely useful in the quinsy and swellings of the throat.

*Succory.* The leaves or roots boiled in water, and a decoction taken fasting, will drive forth phlegmatic humors from the stomach. It opens obstructions of the gall ducts in the liver ; is a great help to the jaundice, and strengthens the stomach and other intestines.

*Mallows and Marshmallows.* A decoction of the roots and leaves with fennel seed, is good for agues. The leaves just scalded and applied to the abdomen, are very useful in the cholic, and quickly eases the pains ; it is also used for glysters, and greatly aids the production of milk. A decoction of the seeds is used in the pleurisy, and other disorders of the lungs. The leaves boiled with milk have the same effect in cleansing the bowels ; one spoonful of the juice in wine will help a woman to an easy and speedy delivery ; the syrup or conserve is also good in the falling sickness ; the leaves in honey may be laid on the eyes, or the leaves bruised for the sting of bees, redness or swelling ; a decoction of the leaves will help all sorts of poison ; a poultice with the leaves of beans or barley flowers, and the oil of roses for cold humors, inflammations, and all pains of the limbs ; the juice in oil for scalds and burns ; the flowers with honey and water, with a little alum as a gargle for the mouth. Marshmallow root and honey are sometimes

used for a cough ; a decoction of the root, seed and leaves in milk is good for the bloody flux ; apply the same, with the addition of a little honey and rosin to wounds, bruises by falls or blows, swellings and joints affected with the rheumatism. The juice of the root beat up with lint seed into a plaster, is a very useful application for the mollifying of pains, inflammations and swellings in any part of the body.

*Carraway.* The seeds or roots being eaten, help to strengthen the stomach and the powers of digestion ; it is good in all cold rheums of the head and stomach ; the roots, herb, and seed, being bruised and fried, placed in a bag very warm, and applied to the lower part of the belly, is extremely good in wind cholic.

*Hops* open all obstructions of the liver, spleen, &c. and cleanse the blood, loosens the belly, provokes urine ; this is performed by a decoction of the tops or the hops themselves ; half a drachm of the seed will kill worms, it must be given in powder in molasses. A syrup cures the yellow jaundice, and eases the head ache ; it likewise tempers the heat of the liver and stomach in hot agues.

*Hore Hound.* The juice of the green herb with honey, or the decoction of the dry with the seed, is good for short winded coughs and consumption on the lungs ; it purges away the yellow jaundice, opens the obstructions of the liver and spleen, and cleanses the lungs of all phlegmatic humors. The juice of the leaves made into an ointment with hog's lard, cures the bite of dogs ; the swelling and pain that comes by the pricking of thorns used with vinegar cures, cleanses and heals.

*Sundue* is good for consumptions on the lungs, and all diseases to which they are subject, as phthisic, shortness of breath and the cough which attends it ; it will also heal the ulcer that appears on the lungs, and the leaves will draw blisters.

*The method of making decoctions, syrups, electuaries, pills and conserves.* Decoctions are made of root, flowers, leaves, barks and seeds ; let the root be boiled thirty minutes and the bark as much more ; then add the seed, flower and leaves, or

you may take them singly, and always boil the water half away then strain it out and it is done.

*Syrups* are made by adding one pint of the above decoction to one pound of sugar ; then boil and continue to stir and scum it until it is as thick as new honey—dose as large as a nutmeg.

*Syrup made of juices.* Beat the herb in a mortar, press out the juice, clarify it by boiling and skimming, then boil it away to one quarter. To one pint of this add one pound of sugar, boil, skim and then strain it.

*Electuaries.* To one ounce of powder add three of sugar or honey, mix them in a mortar ; you cannot pound them too much.

Pills are made with syrup or jelly and powder.

*Conserves.* Take the leaves and flowers to be made into conserve, pound them in a mortar, add their weight of sugar and pound them again.

*A receipt for the Jaundice.* Take one spoonful of snake root, one of blood root, two of horse-radish root, two of angelica root, two of gold thread, two of burdock root, two of iris-luta root, two of mustard seed, two of oilnut bark, of the root two, of the inside bark of black cherry tree two, of black alder bark two and two spoonfuls of the bark of poplar root, all to be made into a powder ; put these ingredients into one gallon of good cider, shake them till well mixed, let them infuse three days, then they are fit for use, first cleanse the stomach by an emetic or physic, then take the above, one glass every morning fasting.

*A receipt for the celebrated bitters called Bryant's Bitters.* Take two spoonfuls of snake root, two of blood root, two of eascarilla bark, four of white solomon seal root, two of white cluster or intervale lily root, one of genson root, six of the inside bark of black cherry tree, eight of black alder bark, two of cinnamon, one of cloves, two of indian barley, pound these ingredients, measure and mix them ; take one glass full for a paper, or to mix with liquid put one paper into a bottle, with



one half a pint of water, let it infuse twelve hours, then add one quart of spirit, shake it and then let it settle and it is fit for use ; take one glass at a time for a male, one third for a female, to be taken in the morning, at eleven and four o'clock fasting.

*A receipt for the canker rash or throat distemper.* Take sage, mullen and plantain, gold thread, secockina bark, spotted maple bark, a small quantity of each, steep these ingredients for a constant drink ; for a decoction to wet the mouth take gold thread, chocolate, root of yellow dock, a small quantity of each, steep these ingredients and apply the liquid to the mouth often ; steep sena for physic every other day if necessary ; if the throat swells bad apply mullen leaves wet in strong vinegar, and change them often.

*A receipt for worms.* Take one ounce of the best peruvian bark in fine powder, and divide it into sixteen equal portions, and give one at a time in molasses every morning. A long continued use of filings of iron is the surest remedy, that most effectually destroys this disposition to generate or breed worms.

*For common physic* take one table spoonful of blood root in molasses ; for an emetic take the same in warm water.

*Directions with respect to drowned persons, taken from the late celebrated Dr. Fessot of France.* Whenever a person has remained under water a quarter of an hour, there can be no hope of his recovery ; the space of two minutes or three, in such a situation, being often sufficient to kill a man irrecoverably ; nevertheless as several circumstances may happen to have continued life, in such an unfortunate situation beyond the ordinary term we should always endeavor to afford them the most effectual relief, and not give them up as irrecoverable too soon, since it has often been known that until the expiration of two and sometimes even of three hours such bodies have exhibited some apparent tokens of life.

Water has sometimes been found in the stomach of drowned persons ; at other times none at all, besides the greatest quantity which has ever been found in it has not exceeded that, which may be drank without any inconvenience ; whence we may

conclude the mere quantity was not mortal, neither is it very easy to conceive how drowning persons can swallow water. What really kills them is mere suffocation or the interception of air, of the action of breathing and the water which descends into the lungs and which is determined there, by the efforts they necessarily, though involuntary make to draw breath, after they are under water, for there absolutely does not any water descend either into the stomach or the lungs of bodies plunged into water. After they are dead, a circumstance which serves to establish a legal sentence and judgment in some criminal cases and trials, this water intimately blending itself with the air in the lungs, forms a viscid inactive kind of froth, which entirely destroys the functions of the lungs ; whence the miserable sufferer is not only suffocated, but the return of the blood from the head being also intercepted, the blood vessels of the brain are over-charged, and an apoplexy is combined with the suffocation. This second cause, that is, the descent of the water into the lungs, is far from being general ; it having been evident, from the dissection of several drowned bodies, that it really never had existed in them.

1. The intention that should be pursued, is that of unloading the lungs and the brain, and of reviving the extinguished circulation, for which purpose we should immediately strip the sufferer of all his wet cloths, rub him strongly with dry coarse linen ; put him as soon as possible, into a well heated bed, and continue to rub him well for some time.

2. A strong and healthy person should force his warm breath into the patient's lungs, and also the smoke of tobacco, if some was at hand, by means of a pipe, channel funnel or the like, that may be introduced into the mouth. This air or fume, being forcibly blown in by stopping the sufferer's nostrils close at the same time, penetrates into the lungs, and there rarifies by its heat, that air, which blended with the water, composed the viscid spume or froth. Hence that air becomes disengaged from the water, recovers its spring, dilates the lungs ; and,

if there still remains within any principles of life, the circulation is that instant renewed again.

3. If a moderately expert surgeon is at hand he must open the jugular vein, or any large vein in the neck, and let out ten or twelve ounces of blood. Such a bleeding is serviceable on many accounts. First, merely bleeding, it renews the circulation, which is the constant effect of bleeding in such swoonings, as arise from an intercepted or suffocated circulation. Secondly, it is that particular bleeding, which most suddenly removes in such cases, the obstruction of the head and lungs ; and thirdly, it is sometimes the only vessel, whence blood will issue under such circumstances. The veins of the feet then afford none, and those of the arms seldom, but the jugulars almost constantly furnish it.

4th. The fume of tobacco should be thrown up, as speedily and plentifully as possible, into the intestines by the fundament. There are very commodious contrivances devised for this purpose, but as they are not common, it may be effected by many speedy means. One, by which a woman's life was preserved, consisted only in introducing the small tube of a tobacco pipe, well lighted up the head, or bowl of it was wrapped up in paper, in which several holes were pricked, and through these the breath was strongly forced. At the first blast a considerable rumbling was heard in the woman's belly, she threw up a little water, and a moment afterwards came to her senses. Two pipes may be thus lighted and applied, with their bowls covered over ; the extremity of one is to be introduced into the fundament, and the other may be blown through into the lungs. Any other vapor may also be conveyed up, by introducing a canula, or any other pipe, with a bladder firmly fixed to it. This bladder is fastened at its other end to a large tin funnel, under which tobacco is to be lighted. This contrivance has succeeded with me upon other occasions in which necessity compelled me to invent and apply it.

5th. The strongest volatiles should be applied to the patient's nostrils ; the powder of some strong dry herb should be blown

up his nose, such as sage, rosemary, rue, mint, and especially marjoram, or very well dried tobacco ; or even the smoke of these herbs are good ; yet all these means are most properly employed after bleeding, when they are most efficacious and certain.

6th. As long as the patient shows no signs of life, he will be unable to swallow, and it is then useless and even dangerous to pour much liquid of any kind into his mouth, which could do nothing but keep up or increase suffocation. It is sufficient in such circumstances to instil a few drops of some irritating liquor, which might also be cordial and reviving. But as soon as ever he discovers any motion, he should take within the space of one hour, five or six common spoonfuls of oximel of squils, dilated with warm water ; or if that medicine was not to be had very speedily, a strong infusion of the blessed thistle or cardus benedictus, of sage, or of camomile flowers sweetened with honey, might do instead of it ; and supposing nothing else could be had, some warm water with the addition of a little common salt, should be given.

7th. Notwithstanding the sick discover some tokens of life, we should not cease to continue our assistance, since they sometimes irrecoverably expire, after these first appearances of recovering ; and lastly, though they should be manifestly reanimated, there sometimes remains an oppression, a coughing and feverishness, which effectually constitute a disease ; it then sometimes becomes necessary to bleed them in the arms. Give them barley water plentifully, or elder flower tea. These unhappy people are sometimes wrapped up in a sheep, calf or a dog-skin immediately fleeced from the animal ; these applications have sometimes indeed revived the heat of the drowned ; but their operations are more slow and less efficacious than the heat of a well warmed bed, with the additional vapour of burnt sugar and long continued frictions with hot flannels. The method of rolling them in an empty hogshead is dangerous, and spends too much time of the greatest importance.



It is some years since a young lady of eighteen years old was recovered, though it is unknown whether she remained under water only a little time, or some hours, who was motionless, frozen and as it were insensible, with her eyes closed, her mouth wide open, a livid color, a swoollen visage, a tumour or bloating of the whole body, which was overladen as it were or water-soaked. This miserable object was extended on a kind of bed, of hot or very warm ashes, quickly heated in great kettles, and by laying her quite naked on these ashes, by covering her with others equally hot, by putting a bonnet round her head, with a stocking round her neck stuffed with the same, and heaping coverings over all this ; at the end of half an hour her pulse returned, she recovered her speech and cried out " I freeze, I freeze !" A little cherry brandy was given her, and she remained buried, as it were, eight hours under the ashes ; when taken out of them she had no complaint except that of great lassitude or weariness, which went entirely off the third day, this method was undoubtedly so effectual, that it well deserves imitation ; heated gravel or sand mixed with salt or hot salt alone would have been equally efficacious, and they have been found so.

*Of the circulation of blood and its consequences.* Every man talks familiarly of the circulation of the blood, and seems to be well acquainted with that subject. But when it is thoroughly considered, it will appear to be one of the most stupendous works of omnipotence. Though the life of the animal absolutely depends upon it, yet the greatest physicians and philosophers of antiquity knew it not. To England and modern times was reserved the glory of bringing this important secret to light. And even after the immortal Harvey published his discovery with all the evidence of a demonstration, it was a long time before Riolanus, and the best anatomist of those days could be persuaded of the truth of it. So great was their attachment to the ancients, that they could scarcely believe their own eyes.

To form a distinct judgment of the mechanism and importance of the circulation, it will be necessary to describe the structure of the arteries, veins and nerves, and take notice of some experiments made upon them. We must in the next place touch upon the cavities of the heart, by means of which the blood is propelled through the body ; and then proceed to observe the extensive use and benefit of this circulation to every branch of the animal economy. From all which it will be obvious to deduce the congruity of the principal rules established by experience for the preservation of health.

The arteries are blood vessels consisting of a close texture of strong elastic fibres, woven in various webs, laid in different directions, and interspersed with an infinity of delicate nerves, veins, and minute arteries. They are divided and subdivided into numberless branches and ramifications, that grow smaller and smaller as they recede from the heart, until at last their extremities become much more slender than the hairs on a man's head (called therefore capillary artery) which are found either to unite in continued pipes with the beginnings of the veins, or to terminate in small receptacles, from which the veins derive their origin.

The arteries have no valves but only where their trunks spring from the heart. They throb and beat perpetually while life remains, and their extremities differ in the thickness of their coats, and some other particulars, according to the nature of the part which they pervade. All the arteries in the lungs (except the small one that convey nourishment to them) are derived from the great pulmonary artery, which issues from the right ventricle of the heart. And all the arteries in the rest of the body proceed from the aorta, whose trunk springs from the left ventricle of the heart. The veins resemble the arteries in their figure and distribution, but their cavities are larger and their branches perhaps more numerous. Their coats are much weaker and slenderer than those of the arteries. They are furnished with several valves, contrived in such a manner as to

permit the blood to pass freely from the smaller into the larger branches, but stop its retrogression. They neither throb nor beat. Their beginnings form continued pipes with the extremities of the arteries, or arise from some gland or receptacle where the arteries terminate. All the veins in the lungs, from their capillary beginnings growing still larger, unite at last and discharge their blood into the left auricle of the heart. And all the veins in the rest of the body empty themselves in like manner, into the vena cava, which opens into the right auricle of the heart.

The nerves deduce their origin from the brain or its appendage, in several pairs, of a cylindric form, like so many skeins of thread within their respective sheaths, which in their progress decrease by endless divisions, until at last they spread themselves into a texture of filaments so slender, and so closely interwoven with each other over the whole body, that the point of a needle can hardly be put upon any part or particle of it without touching the delicate branch of some nerve.

The great Harvey and others made several experiments upon the vessels we have described, in order to demonstrate the circulation of the blood. For instance, it has been found by many trials, that when an artery is laid bare, and a ligature made upon it, if you open the artery with a lancet between the ligature and the heart, the blood will rush out with great violence ; and this rapid jerking stream will continue (unless you stop it by art) until through loss of blood the animal faints or dies. But if you open the same artery between the ligature and the extremities, a few drops only will ooze out from the wounded coats of the artery.

On the other hand, when a vein is laid bare, and a ligature made upon it, if you open that vein between the ligature and the extremities, the blood will gush out, as we see in common venesection. But if we open the same vein between the binding and the heart, no blood will appear. From these experiments it is obvious to the slightest attention, that the blood flows

from the heart, through the arteries, to the extreme parts of the body, and returns again through the veins to the heart. For the regular performance and continuation of this motion of the blood (called its circulation) through all the different parts of the body the wise Architect has furnished the heart, which is the *primum mobile*, and gives the first impulse, with four distinct muscular cavities, that is, with an auricle and a ventricle on the right side, and an auricle and a ventricle on the left, through these cavities curiously adapted to their respective offices, the blood circulates in the following order : It is received from the veins first into the right auricle, which contracting itself, pushes the blood into the right ventricle until it is filled ; it contracts itself with great force and impels the blood into the pulmonary artery, which passing through the lungs and returning by the pulmonary veins, is received into the left auricle of the heart and from thence it is pushed into the left ventricle. The left ventricle thus filled, contracts itself, and drives the blood with great rapidity to all the parts of the body, and from them it returns again through the veins into the right auricle of the heart as before. It is very remarkable, that we have here a double circulation, one from the right ventricle through the lungs to the left auricle of the heart, in order to convert the chyle into blood, and finally prepare it for the nourishment of the animal. The other from the left ventricle through the whole body, to the right auricle of the heart which serves to apply that nourishment to every part, besides various other purposes.

But to proceed, of these four muscular cavities, the two auricles are contracted at the same instant, while the two ventricles are dilated ; the ventricles in their turn, are contracting themselves at the very instant that the auricles are dilated. The arteries in like manner beat in alternate time with the ventricles of the heart, that is, when the ventricles are contracted, the arteries are distended, and while the arteries contract themselves the ventricles are distended.

The nerves as well as the veins and arteries, act their part in



this rotation of the blood ; for if you bind up the eighth pair which proceeds from the brain to the heart, the motion of the heart immediately languishes, and soon ceases entirely.

Thus we have a perpetual motion (so vainly sought for by some philosophers and mathematicans) which none but a being of infinite wisdom and power could produce ; and perhaps its continuation requires the constant aid of the same hand that first gave it existence. The brain transmits animal spirits to the heart, to give it a vigorous contraction. The heart, at the same instant, pushes the blood into the brain to supply it with new spirits, by which means the head and the heart mutually support each other every moment. But this is not all, the action of the heart sends the blood and other vital humors over the whole body by the arteries, and distributes nourishment and vigor to every part, (while perhaps the animal spirits, from the extremities of the nerves, return again into the blood) and the whole reflux mass is conveyed back through the veins into the heart, which enables it, without intermission, to persist in rolling this tide of life. If we now take a view of the use and importance of the circulation of the blood to the whole animal economy, we shall find it very extensive.

When this circulation is duly performed, man continues in good health ; when it grows irregular he sickens, and when it ceases he dies, nay, if but one member should be deprived of it, that member presently corrupts and mortifies.

But further, a moderate and calm circulation of the blood is necessary even towards the true and right government of our passions and the true use of our reason ; we know by daily experience that the influence of the mind upon the body with respect to health, and of the body upon the mind with respect to the intellectual faculties is very great.

Sudden terrors have killed some and distracted others ; anger and grief impair health, cheerfulness and contentment promote it.

Inflammations and other disorders of the brain suspend the

right use of our reason. Many arguments induce us to believe that the nerves serve for sensation and muscular motion, and that by means of these two the mind carries on its correspondence with external objects. We know also that the nerves are supplied with spirits from the brain, and the brain with blood from the heart ; from all which it is evident that the circulation must be gentle and regular.

I shall conclude this article, of the uses of the circulation, by observing that the same circulation which supports life so long, and preserves it in vigor, does at last, by a mechanical necessity, stop its own course and destroy the animal from the perpetual friction, and attraction of the parts one against the other, the stamina of fibres in a course of years become rigid and lose their spring ; the larger pipes grow hard and the small ones contracting, gradually become at last impervious, the body is shrivelled and the motion of the fluids first languishes and then ceases, and these causes bring on old age and death.

*A cure for a cancer.* Take strong potash lye, of the ashes of red oak bark boiled down to the consistence of molasses to cover the cancer with it, and in about an hour afterwards cover this plaster with tar which must be removed after a few days, and if there are protuberances in the wound apply more potash to them, and the plaster again, until they all disappear ; after which heal the wound with any common salve.

*A cure for a weak stomach and a cough.* Take two ounces of gum-mastic, two of spermaceti and melt them over a slow fire, and take two pounds of brown sugar, that is bright, put in the sugar after the other is melted, a little at a time, and stir it till it is all melted and mixed, then make it into small rolls ; take a piece the size of a walnut three times a day on an empty stomach.

*To make a strengthening plaster.* Take the pitch of pine knots and hemlock gum, equal quantities of each, melt them together and put in a small quantity of sulphur ; it is then fit for use.

*A cure for the rheumatism.* Take a pine knot that comes out of the ground that is very full of pitch, saw it and take one pint of the dust, and one ounce of blood root and one and a half of snake root, steep these in two quarts of the best of brandy ; take one table spoonful three times a day or more, or less, according to its effects, as the patient can bare.

The following valuable remarks, in addition to those contained in the preceding pages on the subject of Midwifery, are taken from the eight edition of a work published in London.

*What Labor is, and the difference of it, together with its different terms.*

By a delivery we understand either an emission or extraction of the infant at the full time, out of the womb. This definition may comprehend as well the natural, which is accomplished by emission, when the infant coming in a commodious and usual figure, the womb sends it forth without extraordinary violence; as the delivery contrary to nature, which we are often engaged in, extracting it by manual operation.

Every time the womb lets pass, or sends forth whatsoever it hath retained and formed after conception, must not be called a labour; for, if a woman voids by the womb what is contained in the beginning after she had conceived, it is properly called an effluxion or slip: because at that time, there is nothing formed or figured, neither have the seeds yet any firm consistence, which is the cause why it slips away so easily with the least opening of the womb, as often happens between the first conceiving and the seventh and eighth day only; after which, until the end of the second month the woman sometimes lets slip false conceptions, which turn to moles, if they continue any longer in the womb; which is then called an expulsion: and if after the third month, or thereabouts, the time when the *fœtus* is wholly formed and animated, it is sent forth before the seventh, in that case it is an abortion, which is always the cause, either that the infant comes dead into the world or dies soon after. But we properly call labour, or delivery, every issuing forth of an infant, which happens after the end of the seventh month to all the remaining part of the time afterwards; because there is then a sufficient perfection, as also strength enough, to come into the world, and live in it afterwards.



As to the general differences of labour, we must take notice, that the one is legitimate or natural, the other illegitimate or against nature. To come to the knowledge of each, we say, that four conditions must absolutely be found in a delivery, that it may deserve to be called legitimate or natural. 1st, that it be at full time ; 2d, that it be speedy, without any considerable accident ; 3d, that the child be living ; and 4thly, that he comes right in a good posture, or situation ; for if any of these four are wanting, the delivery is against nature ; and the more, by how much there are more of them wanting.

As to the due time of labor, most authors assert that nature hath appointed to all other animals a certain limited time of going with young, and bringing them forth ; but that woman only by a particular favour of the same nature, have none prefixed, neither for conceiving, going with child, nor bringing forth. And as to conception, 'tis most certain, that a woman can conceive at any time, night or day, summer or winter, or any other season whatsoever ; because she can copulate when she pleaseth, which few other animals can, who copulate but at certain seasons when they become lustful ; but as to the time they are accustomed to go with young, it is no more precisely determined to them, than to a woman ; for as she may be brought to bed either in the 7th, 8th, 9th, 10th, yea, and sometimes the 11th month (which happens very rarely) but for the most part in the 9th month. So likewise for example, though the ordinary time for a bitch to puppy is the 4th month, or thereabouts, so some puppy sooner and some later ; and ewes which yean their lambs at the end of 5 months, advance or recede from that ordinary term, according to the ground where they feed, and the quality of their pasture, to which contributes many particular dispositions of each of these animals ; which likewise happens to all others, as well as to women. We may perceive the same also in fruit, for the seasons and different climates always more or less assist their speedy maturity, which depends likewise very much on good husbandry. The

first time that a child may live, when born, is the 7th month complete, and it may better from that till the end of the 9th month ; but as soon as that time is passed, the stay it makes after in the womb, is no ways beneficial to it, because it hath then acquired all necessary perfection and strength sufficient to resist all outward injuries. The child born before the 7th month cannot live long, as we said before, because of its weakness ; but he that is born in the 8th month may very well live, yea, and more likely than if born in the 7th month (which is contrary to the opinion of all the world ;) because it is more perfect, as I shall demonstrate more particularly in the course of these remarks, where I shall show the cause of this error.

Now as we sometimes see children born at the seventh months end, do live notwithstanding ; so there are some women not brought to bed till towards the 10th month, and sometimes not till the beginning of the 11th ; although this may happen in some, yet there are many who deceive themselves in their reckoning, believing that they are gone but 7 or eight months, and sometimes 10, or more, when they are but just 9 ; that which thus abuseth them, is their imagining themselves with child precisely from the suppressing of their courses, tho' it be not always true ; because some have wanted their courses two months before they became with child ; and others have them on the contrary, two or three months after, in the usual manner ; which daily happens according to their different constitutions and temperaments, more or less sanguine.

If the entire and perfect term be necessary to the legitimate and natural birth ; a good figure and situation of the child is no less, which ought to come with the head first, in a strait line, having the face turned downwards, that is, towards the mother's back, the arms couched along its sides, and the thighs stretched upwards. This figure is much the better and convenient, because after the head (which is the biggest part of the child) is passed, all the rest comes forth easily, and that being so,

none of the joints of its body can be turned to hinder its passage forth ; but any other part that may first present itself to the labour, makes it unfortunate, and against nature, in which case there is often great danger to mother or child, and sometimes to both, if not suddenly and duly helped.

They who have no perfect knowledge of the parts of a woman's body, acquired by Anatomy, are contented to admire, and cannot (as they say) conceive how it is possible, that an infant so big, can pass in time of labour through the vagina of the womb so small ; at which *Galen* and many other authors have much admired ; many of whom are of opinion, that the woman's os pubis is separated to enlarge the passage at that time, without which it would be impossible for the infant to have room enough to be born, and therefore women a little antiquated suffer more in their first labours than others, because their os pubis cannot be so easily separated, which often kills their children in the passage. Others are of the opinion, that it is the os ilium which is disjoined from the os sacrum to the same purpose ; and say, both the one and the other of them, that these bones thus separated at the hour of labor, are therefore by degrees a little before disposed by the slimy humors which flow forth from about the womb, and then mollify the cartilage, which at other times joins them firmly. But these two opinions are as far from truth as reason ; for anatomy convinceth us clearly, that the womb by no means toucheth these places, or doth mollify them by its humours ; as also, that these bones are so joined by the cartilage, that it is very difficult to separate them with a knife, especially the ilium from the sacrum, and almost impossible in some elderly women, without great violence, altho' *Ambrose Parey* (citing many witnesses then present at the thing) reports the history of a woman, in whom (having been hanged 14 days after she was brought to bed) he found, as he saith, the os pubis separated in the middle the breadth of half a finger, and the ossa ilia themselves disjoined from the os sacrum. I will not in this case accuse him

of imposture, for I have too much respect for him, and esteem him too sincere for it ; but I indeed believe that he was mistaken in this separation ; for there is no likelihood, that being so at the time of her labour, it would remain so a fortnight after the breadth of half a finger ; for then they should have been obliged to carry this woman to execution ; for she would not have been able to have supported herself to climb the ladder of the gibbet, and to keep herself on her legs, according to the custom of other malefactors ; because the body is only supported by the stability of these bones. Wherefore we must rather believe, as most probable, that such a disjunction and separation was caused either by the falling of this woman's corps from the high gibbet to the ground after execution ; or rather by some impetuous blow on that place, received from some hard or solid thing. If we examine well the different figure and structure of these bones, between a man and a woman's skeleton, we shall find a larger empty space and distance between these bones, much more considerable in women than men, and that to this purpose the least women have the bones of the ischion more distant the one from the other, than the biggest man ; they have all likewise the os sacrum more outwards, and the os pubis flatter, which makes the passage from this capacity larger, and more able to give way to the child at the time of the labor ; they have besides this, the bones ilia much more turned outward that the womb being impregnated, may have more room to be extended on the sides, and be more at ease supported by such a disposition as is here represented.

The bladder and rectum being emptied of the excrements they contain do in no wise hinder the womb, on purpose made membranous, from dilating itself as it doth, to let the infant pass in labor, by this great empty space sufficient for it, without any necessity that these bones should be disjoined or separated ; for if it should so happen, women could not keep themselves on their legs, as many of them do, immediately after they are brought to bed, because it is instead of a support



to them, as is already said, and of a middle juncture to all the rest, as well of the upper as nether parts of the body. I noted that very well in the *Hostel de Dieu* of Paris, in the many women I have layed there. When women, that are there to be brought to bed, begin to be in labor, they go into a little room called the stove, where all are delivered upon a little low bed made for that purpose, where they put them before the fire ; afterwards, as soon as it is over, they conduct them to their bed, which sometimes is a good way off from this little chamber, whither they walk very well ; which they could never do, if their os pubis, or those of the ilia, were separated the one from the other ; besides, we often see maids that conceal their labor, put themselves (the better to hide their faults) immediately to their ordinary business, as if they ailed nothing ; and in all that I have delivered, I could never perceive this imagined disjunction, putting my hand on the pubis when the child was in the passage ; but I have indeed found the coccyx, which is joined with a loose joint to the inferior extremity of the os sacrum, to bend outwards during labor, in which part the women feel sometimes much pain, because the coming forth of the child offers great violence to it, and because its head then doth much press the rectum against it.

Moreover, having often seen and dissected women dead a few days after delivery, I found it very difficult to separate these bones with a strong sharp penknife, where I could never find the least appearance of any preceding separation. And if ancient women have more pain with the first children than the younger, it doth not proceed from the difficulty of the separation of these bones (which never is for the reasons above) but because the membranes of their womb are dry, hard and callous ; and particularly its internal orifice, which therefore cannot so easily be dilated as young womens, being more moist.

Having sufficiently explained what is delivery, and all its differences, we must now examine what signs usually precede, and what accompany a natural delivery, and an unnatural one.

*The signs that precede and accompany, as well a natural as an unnatural delivery.*

When women with child, chiefly of their first, perceive any extraordinary pains in their belly, they immediately send for their midwife, taking it for their labor ; who when she is come, ought to be well informed of the matter, and careful not to put her in labour before there is a disposition to it ; for many times both mother and child lose their lives, when it is excited before the due time. Those pains which may be called false, are usually caused by a cholic proceeding from wind, which come and go, griping the whole belly, without any forcing downwards or into the womb, as those do which precede or accompany labor ; and this cholic is dissipated by warm cloths applied to the belly, and a clyster or two, by which true labor pains are rather furthered than hindered. A woman may feel other kind of pains coming from an emotion caused by the flux of the belly, which are easily known by the frequent stools that follow.

The signs preceding a natural labor few days before, are, that the belly which before lay high, sinks down and hinders a woman at that time from walking as easy as she used ; and there flows from the womb slimy humours, appointed by nature to moisten and smooth the passage, that its inward orifice may the more easily be dilated when it is necessary ; which beginning to open a little at that time, suffers that slime to flow away, which proceeds from the humors that strain through the thin substance of the infant's membranes, and acquires a viscus consistence by the heat of the place.

The signs accompanying present labor (that is, shewing, that the woman is effectively in labor) are, great pains about the region of the reins and loins, which coming and reiterating by intervals, answer in the bottom of the belly with congruous throws ; the face red and inflamed, because the blood is much heated by the continual endeavors a woman makes to bring

forth her child ; as also, because that during these strong throws her respiration is ever intercepted, for which reason much blood hath recourse to the face ; her privy parts are swelled, because the infant's head (lying in the birth) often thrusts and causeth the neighboring parts to distend outwards, which thence appear swelled in this manner. She is often subject to vomiting, which makes many believe, who know not the cause of it, that the women to whom it happens, are in danger ; but on the contrary, it is ordinarily a sign of speedy delivery, because the good pains are then excited and redoubled every moment, until the business be finished. This vomiting comes from a sympathy between the womb and stomach, by reason of the ramifications of the nerves of the sixth pair of the brain, which are distributed to both the one and the other, and by which it communicates the pain it feels at that time, arising from the agitation, the violent and frequent motions the child causeth, and the strong compression the muscles of the lower belly makes during the throws, for to help the issuing forth of the child ; besides, when the birth is very near, women are troubled with an universal trembling, and principally of the legs and thighs ; not with cold, as at the beginning of an ague-fit, but with the heat of the whole body ; and the humors which then flow from the womb, are often discolored with blood, which with the signs abovementioned, is an infallible mark of the nearness of the birth, 'tis that the midwives usually call shews ; and if one then puts up their finger into the neck of the womb, they will find the inner orifice dilated, at the opening of which the membranes of the infant, containing the waters, present themselves, and are strongly forced downwards with every pain the woman hath ; at which time one may perceive them to resist, and again press towards the finger, being by so much the more or less hard and extended, by how much the pains are stronger or weaker. These membranes with the waters in them when gathered (that is, when they are advanced before the head of the child, which makes the midwives call it, the gathering of

the waters) presenting themselves at this inward orifice, do then resemble very well to the touch of the finger, the abortive eggs which have yet no shell, but are only covered with a simple membrane. After this the pains redoubling continually, the membranes are broken by the strong impulsion of the waters which incontinently flow away, and then the head of the child is easily felt naked, and presented at the opening of the inward orifice of the womb. Now all these, or the greatest part of them met together at what time soever of a woman's going with child it be, whether full time or no, one may be assured, she will soon be delivered; but great care must be taken not to hasten her labor, before the necessity of it be known by these signs; for that would but torment the woman and child in vain, and put them both in danger of their lives, as that midwife did, whom I found endeavoring to put *Martha Rolet* in labor at six months end, because of some pains she had in her belly and reins, without any other accident answering them downwards.

Labour contrary to nature, is when the child comes in an ill figure and situation; as when it presents any otherwise than the head first, as also when the waters flow away a long time before it is born, because it remains dry in the womb, and they are absolutely necessary to moisten the passage, and render it more slippery. When the after-burthen comes first, it is an accident which renders the labours always dangerous, by reason of the great flux of blood usually following, of which the mother may die in few hours, and the infant (because it receives no more nourishment) is quickly smothered in the womb for want of respiration, which it then needs, if it stay never so little after. The labor is also grievous, when accompanied with a fever, or any other considerable distemper, which may destroy the child in the womb, as also when pains are small, and come slow with long intervals, and little profit, by reason of which a woman is extremely tired; but the difficulty most frequent and ordinary comes from the infant's wrong posture. We shall speak more particularly of the signs of all these different deliv-



eries, in treating of them severally hereafter. And now come to the enquiry of some particulars, without which it is impossible to assist a woman safely in her natural labour, or to help her in the unnatural ones ; and therefore we will examine every thing that is in the womb with the infant during pregnancy, and describe those that first offer themselves to pass the orifice, when the woman is near her delivery, which are the membranes of the infant, and the waters contained in them.

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*Of the membranes of the infant, and the waters.*

As soon as the two seeds have been confusedly mixed and retained by conception, the womb immediately after, by means of its heat, separates this chaos, to make out of it the delineation and formation of all the parts, and begins to work upon these seeds, which tho' to sight they appear similar and uniform, yet in effect contain in them dissimilar parts ; all which it separates and distinguisheth one from the other, inclosing the most noble, and on the outside the most glutinous and viscous, of which first the membranes are formed to hinder the spirits, wherewith the spumous seed abounds, from being then dissipated, and to serve afterwards to contain the infant and the waters, in the midst of which it swims, that they may not stream away.

As the membranes of the fœtus are the first parts formed, so are they with waters the first that in time of labor present themselves to the passage before the infant's head. Most authors are so dark in the descriptions they make of these membranes, that it is very hard to conceive them as they are, by the explication they make of them. They do not so much as agree in the number of them, some account three as well for a child as a beast, to wit, the chorion, the amnios, and the allantoides; others account but two, because there is no allantoides in a human fœtus, but to speak properly (if it be strictly examined)

what there is (as I have often done) there will be never found but two, which are so joined and contiguous the one to the other, that it may be said to be but a double one, which may indeed be separated and divided into two. I will explain it on such wise, as may be best understood by those that are ignorant of it : for there are many, who think with *Galen*, that these membranes are separated and distant the one from the other, and that the one surrounds only the infant, and the other receives the waters which are partly engendered from sweat and partly from the urine, (as they imagine) and believe further that these waters themselves are separated the one from the other by these membranes, which is quite contrary : for they are both so joined the one to the other, that they two compose as it were but the same body and membrane, which serves to contain the infant with the waters, which are all of a nature, and shut up in the same membranes, as I shall make appear hereafter in speaking of their original ; it matters not to the truth, after what manner this be explained, provided it may be understood as it is.

The exterior part of this membrane, or double involver ; or if it be esteemed two, the first membrane presented without, is called chorion, because it immediately contains and invirons the other, which is called amnios, that is a little lamb, because it is so small and thin. *Galen* calls the burden chorion. But to render this more intelligible, we shall take this first membrane for the chorion, which may be again separated and divided into two, though effectively it be but one. The chorion is a little rough and unequal throughout the whole outside of it, in which many small capillary vessels may be observed, running quite round, as also many little fibres, by which it cleaves to every side of the womb : but it is a little more smooth within, where it joins every where, and unites with the amnios, in such a manner as that it appears (as we have already declared) but as one and the same membrane. This chorion covers the placenta, and cleaves close to the forepart of it, which respects

the infant, by means of the interlacings of an infinity of vessels. It is also principally fastened to the womb by the whole circumference of the placenta, in which part this membrane is a little thicker.

The amnios, which is the second membrane, is three times thinner than the chorion ; and is very smooth within, but not just so much where 'tis joined and united to the chorion. This membrane is so thin, that it is quite transparent ; and hath no vessels in it, which makes it so thin, as cannot be imagined without seeing. This amnios doth in no wise touch the placenta, though it covers it, but it lines only all the inner part of the chorion, which is between, and from which it may be wholly separated, if it be done with care.

The better to conceive this as it is, and after what manner these membranes are in the womb, consider the composition of a foot-ball, imagining the leather which covers it, to be the womb of a pregnant woman, and the bladder blown up with wind within the foot-ball, to be this double membrane of the chorion and amnios, in which are contained the child and the waters together ; and even as the outside of this bladder toucheth every where (because it is blown up) the leather of the foot-ball. So likewise the membranes of the fœtus are joined on all sides to the womb, except where the burden cleaves to it, in which place it passeth above it.

As to the third (or rather pretended) membrane, which authors name allantoide, and say it is like a sausage, or girdle, which surrounds and clothes the infant from the cartilage xiphoide, reaching only below the flanks, it is most certain, there never was any such thing in any of these animals, whose dams have but one young at a time, no more than women, as sheep, cows, mares, she-asses, nor any other for ought I could ever learn after many curious inquiries.

Sometimes infants at their birth bring forth these membranes upon their head, and then 'tis said they will be fortunate : which is merely superstitious, because it happens by the

strength of their substance, so that they cannot burst by the impulse of the waters, or the womans throws in labor ; or because the passage being very large, and the infant very little, it passeth very easy without violence. In truth in this respect they may be said to be fortunate, for having been born so easily ; and the mother also for being so speedily delivered ; for in difficult labours, children are never born with such caps, because being tormented and pressed in the passage, these membranes are broken and remain still there.

Within the infant's membranes (disposed as I have explicated) are contained the waters, in the midst whereof he swims, and is situated ; the original of which seems very uncertain, if the different opinions of authors upon this subject be regarded. Some will have them to be the urine emptied out of the bladder by the ouraque, because they cannot find a true and easy way for it ; and because their colour and flavor much resembles the urine contained in the bladder ; but it is very certain, it cannot be so as they say, because the urachus is not perforated in the fœtus, and it comes not forth of the navel ; for the place where it is fastened is always tendinous and very like a small lute-string, through which, it is most certain, nothing can pass, how subtil soever ; as I have often observed, and seen Mr. Gayant observe, who is, by universal approbation, the most exact and expert anatomist that hath been this long time in Paris ; for whose merit, his majesty hath conferred that honour of choosing him before all others, to make those curious inquiries and many fair experiments, in which several choice and knowing persons are continually employed, who are of the royal academy. Now this natural conformation doth clearly manifest that Laurentius was abused, when he saith, that he had seen a man, whose ouraque was not closed, to void quantity of water by the navel ; inferring thence, that it came from the bladder by this urachus ; and that which is contained within the infant's membranes, is collected after the same manner. I doubt not he saw a man void water by the navel, as he saith ;



but it did certainly proceed from the capacity of the lower belly, where he had a dropsy, and not from the bladder ; for there is no cavity in the urachus, as we have said, at least none (except it be against the order of nature) upon which, in this case we must so rely, as to affirm it ought to be so in all other subjects.

There are others, who will also have these waters to be the urine. But they are of opinion, that it passeth through the yard, whose passage is always open ; and not by the urachus, which never is hollow.

For my part, as it appears to me, with more reason, and as indeed it is, these waters are only generated out of vaporous humidities, which transude and exhale continually out of the infant's body, and meeting these membranes, through which they cannot pass, because they are too thick and close, are turned into water, which is thus by little and little collected, as well during the first months of conception, the child not yet quick, as all the remaining part of the time after it is : For vapors pass forth and exhale out of all porous bodies that are hot and moist, as is that of an embryo. The argument is very weak, by which they maintain these waters to proceed from the urine, because the waters are salt, as the urine is ; now sweat, tears, and other humors, which distil and transude out of the body, are as well salt as the urine, of which the infant, whilst it is in the womb, cannot have much more than ordure in the guts, because at such time it receives no nourishment by the mouth, and that all its superfluous humors may easily pass away by transpiration, through the substance of all the parts of its body, which is very tender : Wherefore I cannot conceive any necessity to oblige them more to empty the urine, which is in a small quantity in the bladder, than the excrements which are in the guts ; which is not then done in any manner, but only after the child is born. *Bartholinus* and others, would however have the infant to void urine through its yard, and that these waters proceed from thence : But there is a greater probability

it should come by transpiration, as I have said ; for before it is yet fully shaped, and quick, there is notwithstanding found a proportionable quantity of these waters to the bigness of his body ; which makes it manifest, that it is neither the urine rendered by the urachus, nor the yolk, as all the world imagine : And that which proves it more plainly, is the example of some children born with their yolk not perforated, who notwithstanding have these waters, whilst they are in their mother's womb.

It must be observed, that when there is more than one child, they are never in the same membrane, unless their bodies are joined and adhere together (which is rare and monstrous when it happens) but each of them have their membranes and waters apart and separate, in which they are each wrapt up by themselves.

These waters, thus collected within these membranes, have divers very considerable uses. They serve the infant to move itself the more easily, as it were by swimming from one side to the other, and that it may not hurt the womb by its frequent motions against it, which would cause great pain, and often excite to abortion, were it dry : They serve also very much to facilitate its passage in the birth, making the way very slippery, and by that means the orifice of the womb being moistened, is better widened, and yielding when they break just when the child is ready to follow, or a little before : for else remaining dry, it is born with greater difficulty, and the mother also more tormented by it.

*John Claudius de la Corvee*, Physician to the late Queen of Poland, in his book, entitled, *De Nutritione Fœtus*, would have these waters to serve the infant chiefly for nourishment, and that it sucks them by his mouth, and swallows them (as he imagines) whilst he continues in the womb : but the truth if the contrary being known to the least scholar, it would be but labor in vain to refute all the reasons he brings to prove and support his saying ; for they destroy themselves, and do all of them correspond to the falshood of their principle.

Having thus sufficiently explained the membranes and waters of the foetus, we must in order enquire after the parts, by means of which it is nourished whilst in the womb, which shall be our following discourse.

These three figures represent the placenta, or after-birth, and the umbilical vessels of the infant.

The first shews the shape of the burden, to the midst of which is fastened the navel-string, and round it may be discerned the membranes of the infant, which remain thus wrinkled when the child is come forth of it.

*A A A shews the body or cake of the burden. B B B the skins fastened round about it. C C C the navel string, which contains the infant's umbilical vessels, and proceeding from his navel, are inserted in the midst of the burden, where they produce an infinity of branches. D D certain eminencies, called knots, found on the string, proceeding from the dilatation of the umbilical vessels more in one place than in the other.*

The second shews the burdens turned on the outside, and the child's belly opened, that the distribution of the umbilical vessels may be then considered.

*E E E shews the burden on that side which cleaves to the womb : On this side there appears no vessels, as there doth on the other ; but only some simple interlinings and small outlets, by which the blood that transudes the womb, may distil into this parenchyma. F F F the membranes, skin or skirt. H a portion of the Amnios separated from the Chorion, marked I. G a part of the Chorion separated from the Amnios, marked A. III the navel-string, in which are many knots. K the navel where the vessels enter. L the umbilical vein, which enters into the fissure of the liver. M the two umbilical arteries, which being conducted along the side of the bladder, are inserted into the iliac arteries, and sometimes into the hypogastricks. N the urachus, which from the bottom of the bladder, couching between the two umbilical arteries, is fastened in the navel, without passing forth, in which place it is not hollow in the least, and is extremely small.*



Fig. 1.



Fig. II.

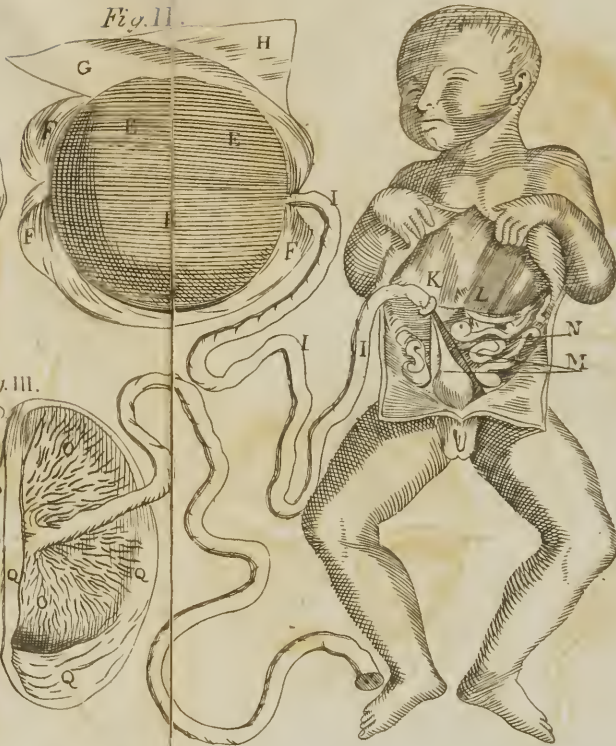
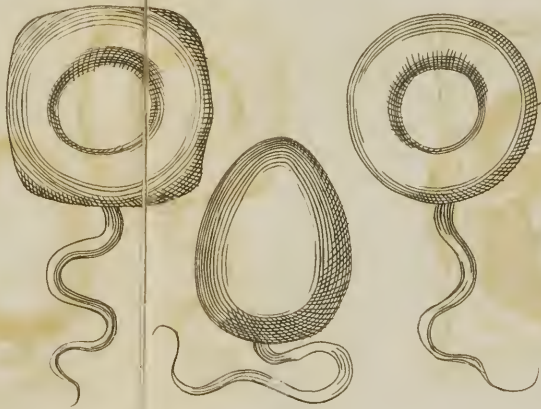
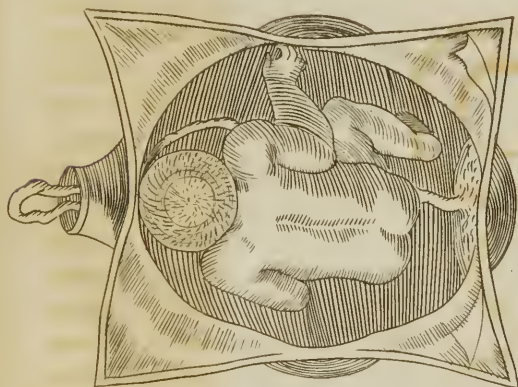


Fig. III.







The 3d shews the burden of twins, where each child hath his several navel-string and membranes apart.

OOOO the fleshy substance or body of the burden, common to both children. PPP the skirt or membranes which wrap up the child on this side a-part. QQQ the other membranes which contain the other child a-part.

As to the strings, which are double to this after-burden, that on the right is dissected at the end, to shew that there are but three vessels only in it.

RR shews a strong membrane, in which these three umbilical vessels are inclosed. S the vein which is very big. TT the two arteries much less than the vein.

The other string cut on the other end, where are only seen the orifice of the vessels.

#### *Of the Placenta, and Umbilical vessels of the child.*

Since the infant is only nourished with the mother's blood whilst it is in the womb, and that big-bellied women never have any that is fair or good ; provident nature hath formed the placenta to serve it for a magazine, that it may always have sufficient, and be there again elaborated and perfected, to render it more convenient for its nourishment ; for without doubt, so gross a blood as the mother's cannot possibly be converted into its delicate substance, if it were not first purified in the placenta, which is afterwards sent to it by means of the umbilical vein, and brought back, as we shall shew hereafter, by the arteries, which are the conduits of which the navel-string is composed. We say that the placenta is nothing but a spongy and fleshy mass, somewhat like the substance of the spleen, and as it were woven and interlaced with an infinity of veins and arteries, which compose the greatest part of its body, made to receive the mother's blood, appointed for the infant's nourishment, which is in the womb. This mass of spongy flesh

is thus called, because it resembles in figure a cake ; some call it the delivery, because being come forth after the child is born, the woman is quite delivered of the burthen of her great belly ; it is likewise called the after-burthen, because it is a second labour, of which the woman is not discharged till after the child is born : There are some who give it the name of the uterine liver, because they say it serves as a liver to prepare the blood appointed for the infant's nourishment ; and *Laurentius* likes rather to call it the pancreas of the womb, and appoints the same use for it, as for the pancreas of the lower belly, to wit, for a rest and support to the vessels of the navel, which disperseth an infinite number of branches throughout all its substance.

This placenta is made of menstruous blood of the mother, which flows into the womb, by the accumulation of which is formed this parenchymatous mass ; the shape of it is flat and round, of about the bigness of a trencher, and two fingers breadth thick towards the middle of it, where the umbilical vessels are fastened : but it is thinner towards the edges of all its whole circumference. It is covered with the chorion and annios on the side next the infant, and on the other side it is joined and fastened to the bottom on the inside of the womb : It is strongest fastened to the womb (with its circumference) by means of the chorion, which cleaves so close to it, by the interlacings of an infinity of vessels, which appear very large in its surface, that it cannot be separated from it without laceration of its substance.

If one considers diligently, as I have done, the placenta on that side which joins to the mother, they may perceive that it is also indued with a kind of light membrane, which is so frail and small, that it is almost imperceptible ; however, it may manifestly be discerned by wiping away the blood with which it is always colored.

There may be again observed, that all the superficies on this side is as it were much interlined, not unlike in some measure

those of an ox's reins : and there appear likewise many small out-lets, by which the blood that transudes through the porous substance of the womb distils into this fleshy mass.

Although there be two children in the womb, nay three, if twins, that is to say, begotten in the same act, they have usually but one common after-burthen ; which hath as many navel-strings fastened to it, as there are children ; which notwithstanding are separated one from the other by their several membranes, in each of which the children are a part with their waters ; if at least their bodies be not joined and adhering one to the other ; in which case the twins of this kind have as well their waters in common, as that they are involved in the same membranes ; but if they be superfœtations, there will be as many burthens as children ; and as superfœtation (if there are as many as may possibly be) happeneth but rarely, so there are few women that have their burthens separated, when they are delivered of several children.

We scarce find any creature but a woman, that hath an after-burthen, like what we have described, and dischargeth it as useless, as soon as the child is born ; for most other animals cast forth nothing after their young, except the waters only and some slime, with the membranes which surround them ; and instead of this fleshy mass, those which ordinarily, as a woman, bring forth but one young at a time, have only some cotyledons, which are many spongy kernels, joined inwardly to the proper substance of their womb, where terminate all the branches of the umbilical vessels of their young, which kernels, as I have often observed in the dissecting of sheep, are not bigger than hemp-seed, when they are not with young ; but when with young, they swell extremely, and become of the size of a man's thumb, the one larger the other less ; they then resemble much the figure of a round mushroom, not yet spread on the wrong side, after it be cut from its stalk ; and to each of those cotyledons, or kernels, are fastened the ramifications of the umbilical vessels ; however it is certain, that the animals which have



ordinarily more than one at a time, as bitches, rabbits and others, have no cotyledons, instead of which each young hath in its cellule a kind of partieular placenta, which the dam eats as soon as soon as she voids it, after she hath gnawed and cut off with her teeth the umbilical vessel which held it.

When a big-bellied woman hath the least indisposition of her whole habit, there is almost ever some mark and impression, either in color or substance, on the after-burthen, which she voids in her labour ; because it being of a very soft substance, easily imbibes the ill humour of the body, which used to be voided by the womb. Its natural colour ought to be red, and so much the fairer and better coloured, as the woman is in good health ; its substance must be whole and equally soft, without the least schirrous hardness.

From the midst of the burthen proceeds a string, composed of many vessels joined together, which serve to conduct the blood appointed for the infant's nutriment ; the number of them is disputed amongst authors ; some recon four, that is, two veins and two arteries ; others five, adding the urachus to them ; but it is very certain, that there are but three only in a human foetus, as I have found by many dissections ; to wit, one vein and two arteries ; the vein having sent forth into the placenta an infinity of branches, like to the root of a tree, is conducted by a single channel all along the string to the infant's navel, which it passeth, to be at last terminated in the midst of the fissure, which is in the inferior part of the liver ; and the two arteries taking their rise out of the same placenta, from a great number of the like roots, pass along the same string by two conduits, piercing also the infant's navel, and end in its iliac arteries, and sometimes in the hypogastricks. The vein is much larger than the arteries ; its cavity is capable to admit a writing quill into it, and those of the arteries only a small bodkin, about half the size of the vein. [As I do remember I once saw three arteries and one vein in the navel-string of a twin.]

These three vessels composing the string, are wrapped up

in one membrane thick and strong enough, proceeding from the chorion, which likewise is clothed about with a production from the amnios, and may easily be separated ; but besides that this first serves them as a sheath, in which they are all lodged, it separates them again one from the other by its duplications ; when the vessels of the string are full of blood, it is then usually about the size of a finger, and ordinarily of the length of a good half ell, and sometimes of two-thirds or three-quarters. It is necessary it should be of this length, that the infant may have liberty to move itself in the womb, and to go forth of it at its birth, without tearing the after-burthen, to which it is fixed. There are many nodes or inequalities, like unto knots, which only proceed from the dilatation of the vessels, which being varicose, and fuller of blood in one place than another, causeth these eminences. Some midwives believes superstitiously, or would make others believe, that the number of these pretended knots answers the number of children the woman shall have afterwards, which is without reason ; because women delivered at forty years of age, and of their last child, as we find by daily experience, have as many knots on the navel-string, as a woman of twenty years, who may yet have a dozen children ; they say further, that if the first knot be red, the next child the woman shall have, will be a boy ; if white, a girl ; but this proposition is as ill-grounded as the other ; for these knots appear only red, or to speak more properly, of a dark blue, according as the vessels are more or less full of blood, and especially the vein which gives it that color, and is so much the more apparent, as it is superficial in that place.

There are many authors who admit the urachus into the number of these umbilical vessels, saying, that it serves to empty the child's urine into its membranes ; however, experience shews us it is no vessel, and that it passeth not forth of the navel ; but that it is only a ligament in a child, as it is in a man, which coming from the bottom of the bladder, terminates at the navel, without traversing it, as they have hitherto mistaken

it. I have opened and dissected above thirty fœtus's, in none of which did I ever find it hollow, but always very solid and tendinous, towards the place where it is fastened to the navel ; and very like to a small lute-string ; notwithstanding I ever found it manifestly hollow in an ewe, which was terminated with their other umbilical vessels, at their cotyledons ; in which animals are also two umbilical veins to be seen, going both near one the other to the liver, which makes that their navel-string consists of five vessels ; but it is not the same in an human fœtus, for there is but one only umbilical vein, and two arteries.

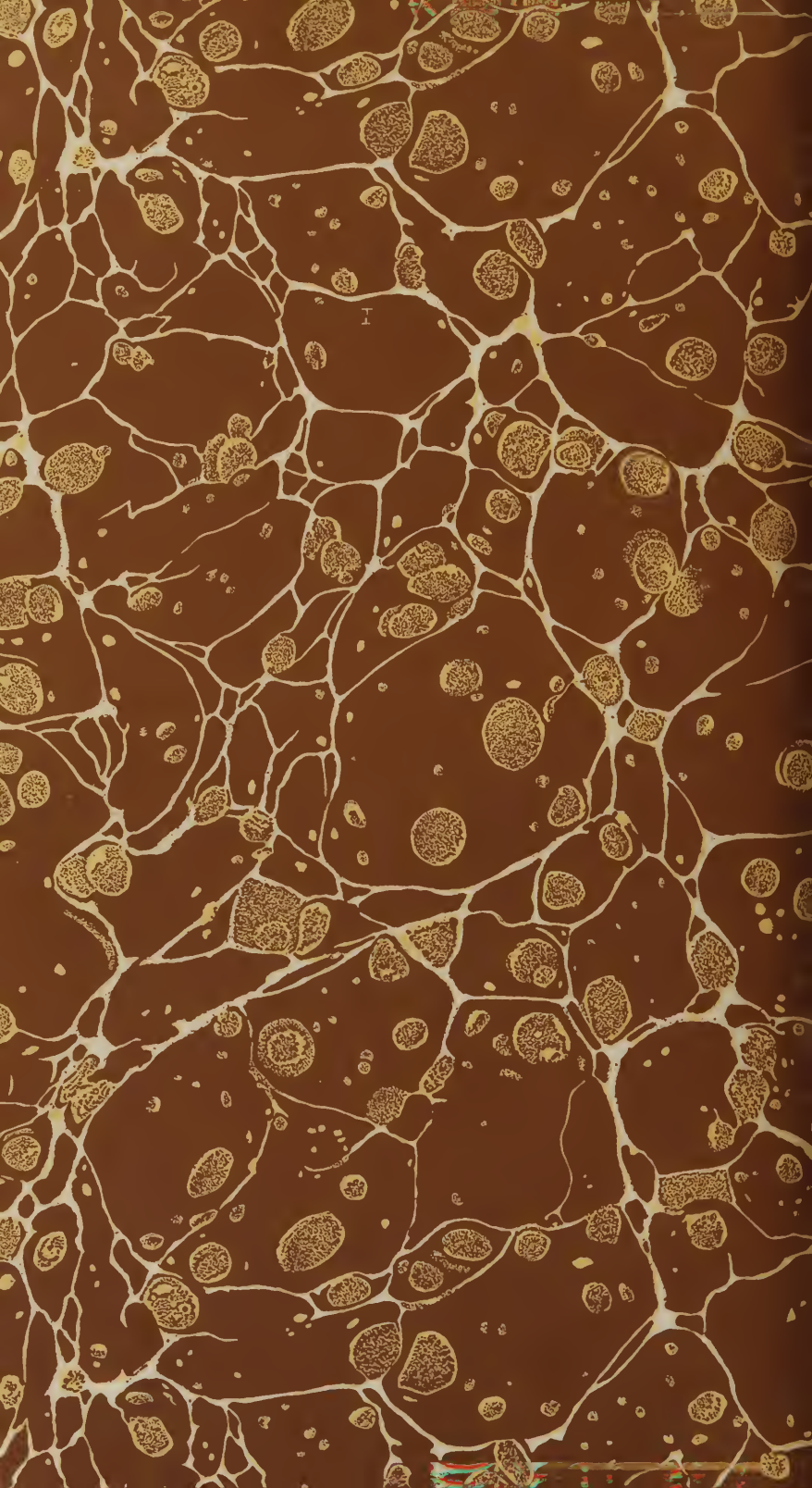
To understand well how the nourishment is conveyed to the infant by the umbilical vessels, it is very necessary to conceive and know in what manner the blood circulates ; which is thus : The blood having been conveyed by the mother's arteries, which end at the bottom of the womb in the placenta, which is there fastened, makes a natural transfusion through the umbilical veins into the child's liver, after which it is carried into the *vena cava*, and thence to the heart, whence it is sent to all the parts by means of the arteries ; and very near a like portion in quantity, being in the iliac arteries, is conducted into the umbilicals, which are there terminated, for to be carried back into the placenta, where this blood being again elaborated, returns to make the same journey by the umbilical vein, passing again to the child's liver, and thence to the heart, and so always successively, without the least intermission. But to be able to conceive easily how the blood circulates in the placenta, and how by the help of that part is made a mutual transfusion from the one to the other, as well in respect to the mother, as of the child ; we need but imagine it to be a common part, and depending on both their bodies ; for as to the mother, the circulation is there made just as in her arm, or any other part of her whatsoever ; and as to the child, it is even the same. [The placenta participates of the nourishment brought to the womb by the arteries, though not by any apparent anastomosis.]

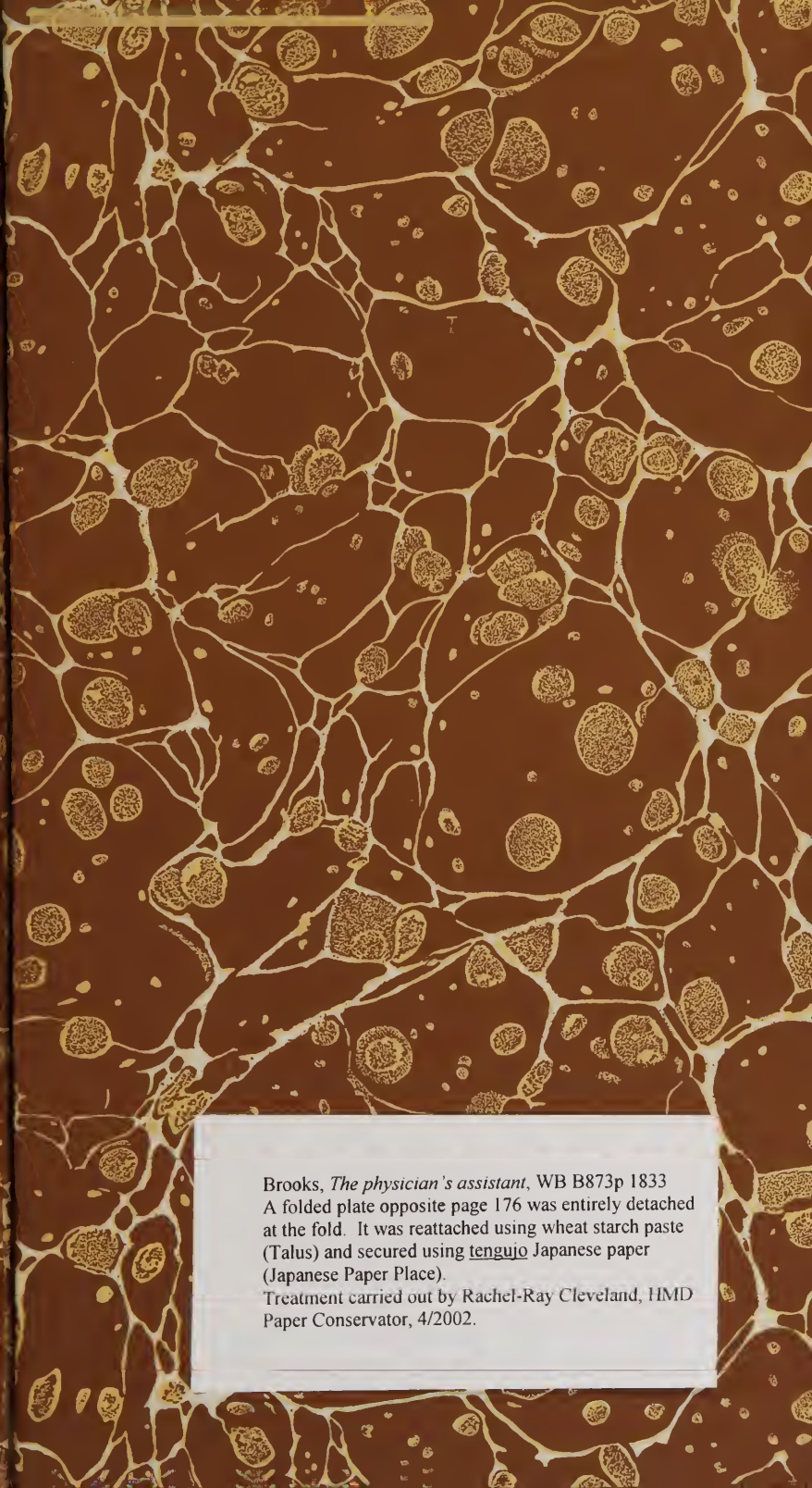
There are no valvules found in the umbilical vein, though I

have curiously examined it, nor are any necessary. These valvules are very frequent in the veins of the arms and legs ; because these parts are obliged to make different motions, which compressing the vessels, would trouble those of the blood, if it were not so sustained and hindered from returning ; but if the umbilical vein hath no need of any, because the navel-string is loose and floating in the midst of the waters where it cannot be compressed ; and therefore the motion of the blood cannot be there intercepted, as sometimes in the arms or legs, or parts where there are strong contractions.

As soon as the child is born, these vessels, which are larger in a foetus than they are in a man, dry up by reason of their cavity ; and that part of them which is without the belly, falls off, and is separated close to the navel five or six days after ; for which reason they lose their first use, and begin afterwards to degenerate into suspending ligaments, to wit, the vein into that of the liver, and the two arteries serve to extend and sustain the bladder by the sides where they are joined to it, the bottom of which is yet suspended by the urachus, which comes not through the navel, as hath been said, but remains so pendant all the rest of its life.







Brooks, *The physician's assistant*, WB B873p 1833  
A folded plate opposite page 176 was entirely detached  
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